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AWARD NUMBER: W81XWH-07-2-0001

TITLE: Resident Research Associateship Program of the AMRMC

PRINCIPAL INVESTIGATOR: Paul Wilson, Ph.D.

CONTRACTING ORGANIZATION: National Academy of Sciences/NAE/IOM  
Washington, DC 20001

REPORT DATE: February 2008

TYPE OF REPORT: Annual

PREPARED FOR: U.S. Army Medical Research and Materiel Command  
Fort Detrick, Maryland 21702-5012

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<b>6. AUTHOR(S)</b>  Paul Wilson, Ph.D.  E-Mail: wilson@bioanalysis.org				<b>5d. PROJECT NUMBER</b>	
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<b>9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)</b> U.S. Army Medical Research and Materiel Command Fort Detrick, Maryland 21702-5012				<b>10. SPONSOR/MONITOR'S ACRONYM(S)</b>	
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December 1, 2008

Ms. Judy Pawlus, Technical Editor  
Office of the Deputy Chief of Staff  
For Information Management  
Attn: MCMR-RMI-S  
504 Scott Street  
Fort Detrick, MD 21702-5400

**Re: Contract No. W81XWH007-2-0001 Technical Report**

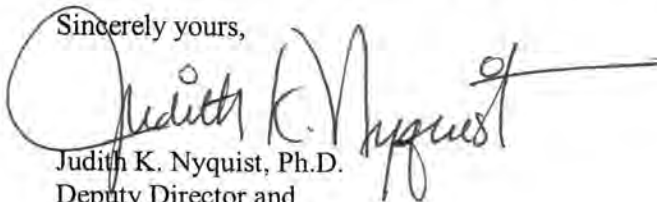
Dear Ms. Pawlus:

The enclosed technical report is to fulfill our contractual obligations for:

<b>Contract:</b>	<b>W81XWH007-2-0001</b>
<b>Title:</b>	<b>U.S. Army Medical Research and Materiel Command Resident Research Associateship Program</b>
<b>Contract Period:</b>	<b>November 11, 2006- September 30, 2011</b>

The report covers the period November 1, 2007 through October 31, 2008. This report fulfills contractual requirements for technical reports. The original report and three copies are enclosed for your use.

Sincerely yours,



Judith K. Nyquist, Ph.D.  
Deputy Director and  
Program Administrator

Enclosures

cc: Mr. Christopher Joyce, USARIEM, Laboratory Program Representative  
Michael Dubick, Ph.D., USAISR, Laboratory Program Representative  
Robert Kan, Ph.D., USAMRICD, Laboratory Program Representative  
Bradley Stiles, Ph.D., USAMRIID, Laboratory Program Representative  
Sara Rothman, Ph.D., WRAIR, Laboratory Program Representative  
Robert Day, Contract Manager, NAS (letter)  
Laboratory Contract File (letter)  
Laboratory Contract Report File

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**THE NATIONAL ACADEMIES**  
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**RESEARCH ASSOCIATESHIP PROGRAM**

**with the**

**U.S. Army Medical Research and Materiel Command (AMRMC)**

**Annual Contract Technical Report**

**Report Period: 11/01/07 – 10/31/08**

**W81XWH007-2-0001**

**Publicity**

The National Academies Research Associateship Programs for the report period were announced to the scientific community in the fall of the preceding year, 2007. Publicity materials describing the National Research Council- U.S. Army Medical Research and Materiel Command [AMRMC]. Programs were distributed in November to presidents, graduate deans, and heads of appropriate science and engineering departments and minority-affairs offices of all academic degree-granting institutions in the United States. An e-mail announcement of the programs was sent to these same contact points prior to each review deadline. Promotional materials were sent to Laboratory Program Representatives, Associateship Advisers, and other interested persons. General advertisements of programs were placed in leading scientific and engineering publications. Publicity materials and other related information were made available on the internet. Research Associateship Programs staff attended numerous professional scientific and engineering meetings and minority recruitment events to promote the various programs and to meet with prospective applicants throughout the year.

**Requests**

Application materials were distributed in response to specific requests for information about the AMRMC Research Associateship Program or as a result of general requests by persons whose fields of specialization appeared to be appropriate for the research opportunities available in the AMRMC laboratories.

## Competition

Panel reviews of applicants for the Research Associateship Programs, including those with the Army Medical Research and Materiel Command are conducted in March, June, September, and/or January of each year. The following is a breakdown of the action taken with the applications during the report period.

	Jan review of Nov app-07	Mar review of Feb app-08	June review of May app-08	Oct review of Aug app-08	TOTAL
<b>TOTAL APPLICATIONS</b>	<b>6</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>14</b>
<b>Number of Applications Reviewed</b>	<b>5</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>12</b>
Applications not recommended (did not pass Review)	1	1	0	0	2
<b>Applications Recommended</b> (passed Review)	<b>5</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>12</b>
Awards offered	5	2	3	1	11
Awards accepted	5	2	3	1	11
Awards declined	0	0	0	0	0
Awards withdrawn by RAP (NRC officially withdrew award <i>after</i> it had been accepted.)	0	0	0	0	0

## Associates' Citizenship

Associates on tenure between 11/1/2007 – 10/31/2008 were citizens of the following countries:

39	U.S. Citizens	
8	Permanent Residents	
1	Australia (Pemanent Resident)	
1	England, U.K. (Perm. Res.)	
2	India (Permanent Resident)	
1	Japan (Permanent Resident)	
1	Latvia (Permanent Resident)	
1	Mauritius (Permanent Resident)	
1	P.R. of China (Perm. Res.)	1 Ireland (J-1 Res. Scholar)
1	Israel (OPT)	1 Japan (J-1 Research Scholar)
1	Australia (J-1 Research Scholar)	1 Russia (J-1 Research Scholar)
1	Brazil (J-1 Research Scholar)	1 Thailand (J-1 Research Scholar)
1	Ghana (J-1 Research Scholar)	

### **Associates' Activities**

Associates who ended tenure during the report period were on tenure for an average of 31 months, ranging from 12 months to 57 months.

Of the 19 Associates who ended tenure during the report period, 16 submitted final reports (84%). In the final reports, Associates indicated the following scholarly activity while on tenure.

<b>25</b> Articles published in refereed journals	<b>15</b> International presentations
<b>1</b> Patent applications	<b>44</b> Domestic presentations
	<b>7</b> Awards

After ending their tenure, Associates indicated their future plans as follows:

<b>0</b> Remain at host agency as perm. employee	<b>0</b> Research/teaching-foreign college/university
<b>11</b> Remain at host agency as contract employee	<b>0</b> Research/admin in industry
<b>0</b> Research position at other US gov't. lab	<b>0</b> Research/admin in non-profit organization
<b>0</b> Administrative position at US gov't. lab	<b>1</b> Postdoctoral research
<b>0</b> Research position at foreign gov't. lab	<b>1</b> Self employed
<b>0</b> Research/teaching-US college/university	<b>2</b> Other (may include unemployed)

In their final reports, Associates were asked to evaluate certain aspects of their experiences on a scale of 1 (low) to 10 (high). The average rating for each item follows:

<b>8.67</b>	<i>Short-term value</i>	Development of knowledge, skills, and research productivity
<b>8.80</b>	<i>Long-term value</i>	How your Research Associateship affected your career to date
<b>7.33</b>	<i>Laboratory Support</i>	Equipment, funding, orientation, safety & health training, etc.
<b>9.07</b>	<i>NRC</i>	Quality of administrative support from the NRC

Advisers also were asked to complete an evaluation of the Associate. The following summarizes the Adviser evaluations for Associates ending tenure during the report period. Of the 19 Associates who ended tenure, 5 Adviser evaluations were completed 26%. Assessments were made on six criteria using the following rating scale: 1-below average, 2-average, 3-above average, 4-good, and 5-outstanding/exceptional. The average rating for each item follows:

<b>3.40</b> Knowledge of Field	<b>3.60</b> Independent Research
<b>3.80</b> Research Techniques	<b>3.80</b> Innovative Thinking
<b>3.60</b> Motivation	<b>3.80</b> Overall Scientific Ability

The Adviser was asked, "Would you like this Associate as a professional colleague?" The Advisers responded in the following manner:

<b>5</b> Yes	<b>0</b> No Comment
<b>0</b> No	<b>0</b> No Answer

Additional information about the Associates' activities can be found in the attachments described below and the Appendix.

**Attachment 1:** Associates who were on tenure between 01/24/07 and 01/31/08. Included are the Associate's laboratory center/division location, the starting and termination dates, and the names of their advisers. For those Associates who ended tenure during the report period, it is noted if the final and adviser evaluation reports have been received. Associates are required to submit final reports upon termination of tenure, and advisers are asked to submit a final evaluation of each Associate. Associates who have not submitted a final report have been sent follow-up correspondence.

**Attachment 2:** All recommended candidates by category (e.g., Recommended, Accepted, No Funding, Declined, etc.). This report includes information about citizenship, the PhD institution, the title of proposed research, proposed or actual starting date, and adviser.

**Attachment 3:** Summaries of Associate patent activity, if any, and Associate research during tenure as reported on the Associates' termination reports. The summary of patent activity includes the patent application title, inventor(s), and date of application.

**Appendix:** Final reports received from the Associates who ended tenure during the report period.



## U.S. Army Medical Research and Materiel Command

12/5/2008 Page 1 of 3

Associate Name+ Adviser	Center	Tenure Dates Start/End	Termination Report	Adviser Report
Alkhalil, Abdulnaser <i>Dr. M. S. Ibrahim</i>	(S) U.S. Army Medical Research Institute of Infectious Diseases	6/1/2007 - 5/31/2009		
Altamura, Louis Anthony <i>Dr. Connie S. Schmaljohn</i>	U.S. Army Medical Research Institute of Infectious Diseases	3/10/2008 - 3/9/2009		
Andres, Devon Katherine <i>Dr. Radharaman Ray</i>	U.S. Army Medical Research Institute of Chemical Defense	5/3/2006 - 5/2/2009		
Banks, Eric Anthony <i>Dr. Thomas J. Walters</i>	U.S. Army Institute of Surgical Research	7/9/2007 - 7/8/2008	Received	Not Recd
Beitzel, Brett Forrest <i>Dr. Connie S. Schmaljohn</i>	U.S. Army Medical Research Institute of Infectious Diseases	1/12/2004 - 1/11/2008	Received	Not Recd
Bhonsle, Jayendra Bhausaheb <i>Dr. Donald P. Huddler</i>	(S) Walter Reed Army Institute of Research, Silver Spring	7/6/2004 - 1/5/2008	Received	Not Recd
Biggins, Julia Elizabeth <i>Dr. Gene G. Olinger</i>	U.S. Army Medical Research Institute of Infectious Diseases	3/19/2007 - 3/18/2009		
Bradfute, Steven Blake <i>Dr. Thomas W. Geisbert</i>	U.S. Army Medical Research Institute of Infectious Diseases	2/16/2005 - 2/15/2008	Received	Not Recd
Brittingham, Katherine Tracey Cecil <i>Dr. Sina Bavari</i>	U.S. Army Medical Research Institute of Infectious Diseases	9/11/2003 - 6/10/2008	Not Recd	Received
Cashman, Kathleen Anne <i>Dr. Mary C. Guttieri</i>	U.S. Army Medical Research Institute of Infectious Diseases	7/11/2005 - 7/10/2009		
Dosanjh, Nuvjeevan Singh <i>Dr. Ashima Saxena</i>	Walter Reed Army Institute of Research, Silver Spring	4/28/2008 - 4/27/2009		
Filippov, Andrei Alexandrovich <i>Dr. Nikolich P. Mikeljon</i>	(S) Walter Reed Army Institute of Research, Silver Spring	7/18/2005 - 7/17/2008	Received	Not Recd
Furtado, Marcio de Araujo <i>Dr. Debra L. Yourick</i>	Walter Reed Army Institute of Research, Silver Spring	9/25/2006 - 9/24/2009		
Ghosh, Kashinath <i>Dr. Peter J. Weina</i>	(S) Walter Reed Army Institute of Research, Silver Spring	8/1/2005 - 7/31/2008	Received	Not Recd
Glynn, Audrey Rose <i>Dr. Douglas S. Reed</i>	U.S. Army Medical Research Institute of Infectious Diseases	11/6/2006 - 8/28/2008	Received	Received
Golden, Joseph Walter <i>Dr. Jay W. Hooper</i>	U.S. Army Medical Research Institute of Infectious Diseases	4/4/2005 - 4/3/2009		
Grant, Rebecca Jean <i>Dr. Chris A. Whitehouse</i>	U.S. Army Medical Research Institute of Infectious Diseases	9/8/2008 - 9/7/2009		
Guarisco, John Arthur <i>Dr. John H. McDonough</i>	U.S. Army Medical Research Institute of Chemical Defense	9/6/2007 - 9/5/2009		
Hammerbeck, Christopher David <i>Dr. Jay W. Hooper</i>	U.S. Army Medical Research Institute of Infectious Diseases	4/10/2007 - 4/9/2009		
Hathaway, Kyle Christopher <i>Dr. Julie A. Pavlin</i>	Walter Reed Army Institute of Research, Silver Spring	6/5/2007 - 6/4/2009		
Honko, Anna Nichole <i>Dr. Lisa E. Hensley</i>	U.S. Army Medical Research Institute of Infectious Diseases	6/1/2006 - 5/31/2009		
Jenkins, Amy Lynn <i>Dr. Susan L. Welkos</i>	U.S. Army Medical Research Institute of Infectious Diseases	8/13/2007 - 8/12/2009		

+ (S) indicates the associate was a Senior.



## U.S. Army Medical Research and Materiel Command

12/5/2008 Page 2 of 3

Associate Name+ Adviser	Center	Tenure Dates Start/End	Termination Report	Adviser Report
Jirage, Dayadevi Balappa <i>Dr. Norman C. Waters</i>	(S) Walter Reed Army Institute of Research, Silver Spring	8/22/2005 - 10/10/2008	Received	Received
Jones, Juli Erin <i>Dr. Allen Cymerman</i>	U.S. Army Research Institute of Environmental Medicine	2/6/2006 - 2/5/2008	Received	Received
Kaba, Stephen Abanega <i>Dr. David E. Lanar</i>	Walter Reed Army Institute of Research, Silver Spring	8/1/2005 - 4/30/2008	Not Recd	Not Recd
Keyser, Brian Michael <i>Dr. Radharaman Ray</i>	U.S. Army Medical Research Institute of Chemical Defense	5/4/2006 - 5/3/2009		
Koehler, Jeffrey William, Jr <i>Dr. Connie S. Schmaljohn</i>	U.S. Army Medical Research Institute of Infectious Diseases	9/17/2007 - 9/16/2009		
Liepinsh, Dmitry <i>Dr. Urszula Krzych</i>	Walter Reed Army Institute of Research, Silver Spring	4/18/2006 - 4/17/2009		
Ling, Yun <i>Dr. Ashima Saxena</i>	Walter Reed Army Institute of Research, Silver Spring	12/4/2006 - 1/3/2009		
McCarthy, Sarah Elizabeth <i>Dr. John W. Huggins</i>	U.S. Army Medical Research Institute of Infectious Diseases	4/1/2008 - 3/31/2010		
McGann, Patrick Timothy <i>Dr. Nikolich P. Mikeljon</i>	Walter Reed Army Institute of Research, Silver Spring	1/8/2007 - 1/7/2009		
Milner, Erin Elizabeth <i>Dr. Michael P. Kozar</i>	Walter Reed Army Institute of Research, Silver Spring	7/23/2007 - 7/22/2009		
Mitchell, Daniel Anthony <i>Dr. Connie S. Schmaljohn</i>	U.S. Army Medical Research Institute of Infectious Diseases	5/14/2008 - 5/13/2009		
Muniz, Alberto , Jr. <i>Dr. Heuy-Ching H. Wang</i>	Walter Reed Army Institute of Research, Silver Spring	10/14/2008 - 10/13/2009		
Ogg, Monica M. <i>Dr. Jay W. Hooper</i>	U.S. Army Medical Research Institute of Infectious Diseases	8/27/2007 - 8/26/2009		
Olivera, Dorian Scott <i>Dr. Alfred M. Sciuto</i>	U.S. Army Medical Research Institute of Chemical Defense	11/13/2007 - 11/12/2009		
Otto, Tamara Caviston <i>Dr. David E. Lenz</i>	(S) U.S. Army Medical Research Institute of Chemical Defense	3/1/2007 - 2/28/2009		
Picchioni, Dante <i>Dr. Thomas J. Balkin</i>	Walter Reed Army Institute of Research, Silver Spring	7/5/2005 - 8/31/2008	Received	Not Recd
Reeves, Tony Elvern <i>Dr. David E. Lenz</i>	U.S. Army Medical Research Institute of Chemical Defense	6/1/2006 - 5/31/2009		
Rickards, Caroline Alice <i>Dr. Victor A. Convertino</i>	U.S. Army Institute of Surgical Research	5/31/2005 - 5/30/2008	Received	Not Recd
Ruff, Albert Leonard <i>Dr. James F. Dillman, III</i>	(S) U.S. Army Medical Research Institute of Chemical Defense	6/28/2006 - 1/4/2008	Received	Not Recd
Rupp, Tracy Lynn <i>Dr. Thomas J. Balkin</i>	Walter Reed Army Institute of Research, Silver Spring	1/23/2006 - 9/14/2008	Received	Not Recd
Schully, Kevin Lee <i>Dr. Timothy A. Hoover</i>	U.S. Army Medical Research Institute of Infectious Diseases	5/1/2007 - 4/30/2009		
Shiraki, Hiroaki <i>Dr. Ai J. Lin</i>	(S) Walter Reed Army Institute of Research, Silver Spring	11/13/2006 - 5/31/2008	Received	Received

+ (S) indicates the associate was a Senior.

## U.S. Army Medical Research and Materiel Command

12/5/2008 Page 3 of 3

Associate Name+ Adviser	Center	Tenure Dates Start/End	Termination Report	Adviser Report
SillerJackson, Arlene Janel <i>Dr. Phillip D. Bowman</i>	U.S. Army Institute of Surgical Research	7/9/2007 - 7/8/2009		
Soojhawon, Iswarduth <i>Dr. Madhusoodana P. Nambiar</i>	Walter Reed Army Institute of Research, Silver Spring	6/2/2008 - 6/1/2009		
Spradling, Kimberly Diane <i>Dr. James F. Dillman, III</i>	U.S. Army Medical Research Institute of Chemical Defense	7/24/2007 - 7/23/2009		
Swanson, Katherine Irene <i>Dr. Russell E. Coleman</i>	Walter Reed Army Institute of Research, Silver Spring	11/21/2005 - 12/31/2007	Received	Not Recd
Takhampunya, Ratree <i>Dr. Huo-Shu H. Huong</i>	Walter Reed Army Institute of Research, Silver Spring	12/4/2006 - 12/3/2007	Received	Not Recd
Taylor, Shannon Lynn <i>Dr. Connie S. Schmaljohn</i>	U.S. Army Medical Research Institute of Infectious Diseases	6/8/2005 - 6/7/2009		
Toth, Stephen I. <i>Dr. Syed A. Ahmed</i>	(S) U.S. Army Medical Research Institute of Infectious Diseases	3/13/2006 - 7/8/2008	Not Recd	Not Recd
van de Wetering, Christopher I. <i>Dr. Patricia L. Worsham</i>	U.S. Army Medical Research Institute of Infectious Diseases	5/1/2008 - 4/30/2009		
Wasserberg, Gideon <i>Dr. Edgar D. Rowton</i>	Walter Reed Army Institute of Research, Silver Spring	6/13/2008 - 6/12/2009		
Yokota, Miyo <i>Dr. Larry G. Berglund</i>	(S) U.S. Army Research Institute of Environmental Medicine	3/29/2006 - 3/28/2009		
Zeitler, Corinne <i>Dr. John H. Carra</i>	U.S. Army Medical Research Institute of Infectious Diseases	1/2/2008 - 1/1/2009		

55 Associates Listed

+ (S) indicates the associate was a Senior.

**Recommended Candidates 11/1/2007 - 10/31/2008**  
**U.S. Army Medical Research and**  
**Materiel Command**

**Attachment 2**

12/5/2008 Page 1 of 3

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**November 2007**

**3- Withdrew before Review**

NYFELER, YVES A  
Citizenship: Switzerland  
Adviser: Dr. Ladaporn Bodhidatta  
Research Field: 3299  
Research Title: Legionella Pneumophila in Thailand sewers  
Ph.D. Date: 2005  
Max Planck Immunization Bio/Ger

**A- Accepted Award ( 5 Applicants listed)**

DOSANJH, NUVJEEVAN S  
Citizenship: England, U.K.  
Adviser: Dr. Ashima Saxena  
Research Field: 0931  
Research Title: The Structural and Functional Characterisation of Human SMP30, a Novel DFPase  
Ph.D. Date: 2005  
Leicester, U Of  
Actual Starting Date: 4/28/08  
Termination Date: 4/27/09

MCCARTHY, SARAH E  
Citizenship: United States  
Adviser: Dr. John W. Huggins  
Research Field: 3298  
Research Title: Comparison of Pathogenecity of Monkeypox Virus Strains in Cynomologus macaques  
Ph.D. Date: 2008  
University of Pennsylvania  
Actual Starting Date: 4/01/08  
Termination Date: 3/31/10

MITCHELL, DANIEL A  
Citizenship: United States  
Adviser: Dr. Connie S. Schmaljohn  
Research Field: A072  
Research Title: Improving the Cross-reactive Humoral Immune Response to Ebola Virus by Immune Focusing and Multi-epitope Boosting of DNA Vaccines  
Ph.D. Date: 2007  
Florida State University  
Actual Starting Date: 5/14/08  
Termination Date: 5/13/09

SOOJHAWON, ISWARDUTH  
Citizenship: Mauritius  
Adviser: Dr. Madhusoodana P. Nambiar  
Research Field: 0999  
Research Title: X-Ray Crystallography and Kinetics Studies of Novel Bis-oxime Reactivators of Acetylcholinesterase  
Ph.D. Date: 2006  
Pune, University of/India  
Actual Starting Date: 6/02/08  
Termination Date: 6/01/09

VAN DE WETERING, CHRISTOPHER I  
Citizenship: United States  
Adviser: Dr. Patricia L. Worsham  
Research Field: 3230  
Research Title: Applying Whole-body Optical Imaging to Study the Course of Infection of Bacillus anthracis and Pathogenic Yersinia in vivo  
Ph.D. Date: 2007  
University of Iowa  
Actual Starting Date: 5/01/08  
Termination Date: 4/30/09

**Recommended Candidates 11/1/2007 - 10/31/2008**  
**U.S. Army Medical Research and**  
**Materiel Command**

**Attachment 2**

12/5/2008 Page 2 of 3

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**February 2008**

**3- Withdrew before Review**

HAN, JASON J	Ph.D. Date: 2006
Citizenship: United States	Washington State University
Adviser: Dr. Benedict R. Capacio	
Research Field: 2969	
Research Title: Determination of the Toxic Mechanism of a New Class of Chemical Nerve Agents	

**A- Accepted Award ( 2 Applicants listed)**

MUNIZ, ALBERTO , JR.	Ph.D. Date: 2007
Citizenship: United States	University of Texas-San Antonio
Adviser: Dr. Heuy-Ching H. Wang	Actual Starting Date: 10/14/08
Research Field: P395	Termination Date: 10/13/09
Research Title: Activation of Canonical Wnt Pathway for Treatment of Retina Degeneration due to the Laser Retinal Injury	

WASSERBERG, GIDEON	Ph.D. Date: 2003
Citizenship: Israel	Ben-Gurion University/Israel
Adviser: Dr. Edgar D. Rowton	Actual Starting Date: 6/13/08
Research Field: 4570	Termination Date: 6/12/09
Research Title: What Do Sand-Flies Want? Unveiling Secrets of Host and Plant Attraction	

**May 2008**

**A- Accepted Award ( 3 Applicants listed)**

GRANT, REBECCA J	Ph.D. Date: 2008
Citizenship: United States	University of Florida
Adviser: Dr. Chris A. Whitehouse	Actual Starting Date: 9/08/08
Research Field: A072	Termination Date: 9/07/09
Research Title: Application of PCR Electrospray Ionization Mass Spectrometry for the Broad Detection of Alphaviruses and Flaviviruses	

PICHUGIN, ALEXANDER V	Ph.D. Date: 2000
Citizenship: Russia	Central Tuberculosis Res Inst/Rus
Adviser: Dr. Urszula Krzych	Expected Starting Date: 1/12/08
Research Field: 3293	Termination Date: 1/11/09
Research Title: Prioritization and Selection of Pre-Erythrocytic Liver Stage Plasmodium Antigens as Vaccine Candidates	

**Recommended Candidates    11/1/2007 - 10/31/2008**  
**U.S. Army Medical Research and**  
**Materiel Command**

**Attachment 2**

12/5/2008 Page 3 of 3

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**May 2008**

**A- Accepted Award** ( 3 Applicants listed)

ROSE, RAJIV	Ph.D. Date: 2006
Citizenship: India	University of Madras/India
Adviser: Dr. Harold G. Klemcke	Expected Starting Date: 1/05/09
Research Field: 2499	Termination Date: 1/04/10
Research Title: Identification of Quantitative Trait Loci for Survival Time to Hemorrhage Using Congenic Inbred Rat Strains	

**August 2008**

**1- Recommended**

AZEKE, JOHN I, JR.	Ph.D. Date: 2007
Citizenship: United States	University of Florida
Adviser: Dr. John S. Graham	
Research Field: 2990	
Research Title: Wound Healing of Cutaneous Sulfur Mustard Injuries	

**A- Accepted Award**

MURAKAMI, YUKI	Ph.D. Date: 2005
Citizenship: Japan	Gifu University/Japan
Adviser: Dr. Frank C. Tortella	Actual Starting Date: 11/10/08
Research Field: 3850	Termination Date: 11/09/09
Research Title: Characterization of Cerebral Metabolic Changes and Evaluation of Brain Specific Hypothermia to Attenuate Injury-induced Metabolic Dysfunction in a Rat Model of Penetrating Ballistic-like Brain Injury (PBBi).	



**U.S. Army Medical Research and Materiel Command**

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**Banks, Eric Anthony**

7/09/2007 7/08/2008

- 1 Research only in preliminary phase.
- 2 1 day post-burn recovery, plantaris shows no changes in PPAR expression; GLUT4 down 50%, CPT I up 100%.
- 3 1 day post-burn recovery, soleus shows 50% decrease in PPAR alpha and 83% increase PPAR gamma.
- 4 Results suggest insulin resistance occurs in plantaris with no change in PPAR expression.
- 5 Soleus shows similar but not significant changes in GLUT4/CPT I; significant changes in PPAR alpha/gamma.

**Beitzel, Brett Forrest**

1/12/2004 1/11/2008

- 1 Developed high resolution footprinting technique to identify functional domains of viral genomes.
- 2 Used technique to identify functionally important regions of Venezuelan Equine Encephalitis Virus nsP3.
- 3 Used data from (2) to construct temperature sensitive mutant that may be pursued as attenuated vaccine candidates.
- 4 Developing technique using next-generation sequencers to footprint entire viral genomes rapidly.

**Bhonsle, Jayendra Bhausaheb**

7/06/2004 1/05/2008

- 1 Highly predictive 3D-QSAR models of Insect Repellents of DEFT analogs and derivatives.
- 2 DeNovo design of broad spectrum Antimicrobial Peptides (AMP).
- 3 3D-QSAR models of AMP against Staphylococcus aureus and Mycobacterium ranae.
- 4 Development of "bioactive conformer mining" method for predictive 3D-QSAR model.
- 5 3D-QSAR models for antimalarial Pf-FABH inhibitors and mefloquine analogs & derivatives.

**Bradfute, Steven Blake**

2/16/2005 2/15/2008

- 1 Discovered that lymphocyte apoptosis in the mouse model of Ebola is very similar to that seen in nonhuman primates.
- 2 Discovered that there is a CD8+ T cell response against Ebola in lethal infection in mice despite lymphocyte apoptosis.
- 3 This response is functional- transfer of CD9+ T cells from dying ebola-infected mice protects naive mice from Ebola infection.
- 4 Utilized humanized mice to develop an in vivo model of human lymphocyte apoptosis in Ebola infection.

**Filippov, Andrei Alexandrovich**

7/18/2005 7/17/2008

- 1 Seven new potential pathogenicity genes (YPO0594-0597, YPO0606, YPO3007, and YPO3010) were mutagenized in both avirulent and virulent strains of Yersinia pestis, the causative agent of plague.
- 2 The loss of YPO0594-0597, YPO0606, YPO3007, and YPO3010 had no impact on the lethality of Y. pestis for Norway brown rats.
- 3 Transposable element IS285 was shown to be a powerful tool for typing of a global Y. pestis collection. The strains were clustered according to their geographical origin. The source of some strains was determined using this approach.
- 4 The genome sequence of plague diagnostic bacteriophage L-413C was determined. A unique tail fiber gene that is thought to be responsible for a high specificity of the phage was identified.
- 5 Plague diagnostic phages are evaluated as potential plague therapeutics. Three phages have been propagated, purified and shown to be noncytotoxic for mouse macrophages.

**Ghosh, Kashinath**

8/01/2005 7/31/2008

- 1 Isolated and identified different symbiotic bacteria from the wild caught sand fly gut and identified them using 16s sequence in order to genetically modify them. Selected few of them which are non-pathogenic to human.
- 2 Genetically modified two of them with marker gene and tested them in laboratory sand fly colonies. Generation of more modified lines with antileishmanial gene is in progress in order to spread in nature to block the transmission of leishmaniasis.
- 3 Identified the sand fly gregarines from two different sand flies and characterized them using SSU sequence. This is the first DNA sequence information of sand fly gregarines. We proposed a new systematics of the sand fly gregarines.
- 4 In collaboration with Dr. Jeff Lord (USDA) we already have the SSU sequence of the two neogregarine parasite, Mattesia Oryzaephili and F. triboli, the genetic informations of the two parasites are still unknown.

**U.S. Army Medical Research and Materiel Command**

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**Ghosh, Kashinath**

**8/01/2005 7/31/2008**

- 5 Recently, we have identified an area of the Leishmania genome which is responsible for the visceralization of the parasite. We have proposed that the genetic polymorphism of the region might play a role in the tropism of the parasite.

**Glynn, Audrey Rose**

**11/06/2006 8/28/2008**

- 1 Determined median lethal dose of *Francisella tularensis* in 3 NHP species.
- 2 Characterized 3 NHP models of tularemia by febrile and CBC responses and bacterial load in blood and organs.
- 3 Identified fundamental differences at cellular level via intracellular cytokine profiling in 3 NHP models.
- 4 Analyzed cytokine response in plasma for Cynos aerosol exposed to Marburg Angola & found increase in chemokine level.
- 5 Analyzed cytokine response in plasma from 3 NHP species aerosol exposed to Ebola Zaire.

**Jirage, Dayadevi Balappa**

**8/22/2005 10/10/2008**

- 1 Pfmrk does not complement the yeast cell cycle mutant kin28 and is not expressed in kin28 cells.
- 2 The activity of the malarial CDK effector PfMAT1 was characterized into two domains.
- 3 Pfmrk was tagged with GFP and overexpressed in *Plasmodium falciparum*. The protein was nuclear-localized.
- 4 PfMAT1 was tagged with RFP and found to colocalize with Pfmrk in the nucleus.
- 5 Pfmrk was expressed with a TAP tag and the cell line was validated.

**Jones, Juli Erin**

**2/06/2006 2/05/2008**

- 1 Determined that erythropoietin and soluble transferrin receptor, measured by enzyme linked immunosorbent assay (ELISA), is not altered after 7 days of intermittent hypoxic exposures.
- 2 Determined that while cardiac output during submaximal and maximal cycle ergometry is not altered after 7 days of intermittent hypoxic exposure, arterial oxygen saturation is improved.
- 3 Determined that while sleep quality and quantity are not altered after 7 days of intermittent hypoxic exposure, arterial oxygen saturation is improved.
- 4 Weapon disassembly/reassembly performance is related to Acute Mountain Sickness but not hypoxemia At 4300 M

**Picchioni, Dante**

**7/05/2005 8/31/2008**

- 1 Sleep propensity when rested significantly predicted individual differences in the response to sleep deprivation in the hypothesized direction.
- 2 Individuals with shorter sleep latency (i.e., higher sleep propensity) when fully rested performed the worst when sleep deprived.
- 3 This finding may be useful in a number of occupational settings that involve exposure to sleep deprivation.
- 4 These include assessing the safety risk associated with particular applicants, aiding supervisors with real-time monitoring, and developing a novel index that can individualize sleep/performance prediction model parameters.

**Rickards, Caroline Alice**

**5/31/2005 5/30/2008**

- 1 Subjects who report pre-syncope symptoms (e.g., dizziness, nausea, lightheadedness) during orthostasis (i.e., standing from a squatting position), display a greater decrease in cerebral blood flow velocity compared with asymptomatic subjects.
- 2 Breathing with inspiratory resistance (via an inspiratory threshold device, ITD) decreases symptoms of orthostatic intolerance (during standing from a squatting position) by increasing oscillations in cerebral blood flow velocity.
- 3 Breathing with inspiratory resistance (via an inspiratory threshold device, ITD) increases tolerance to central hypovolemia induced by lower body negative pressure (LBNP).
- 4 This improvement in tolerance to central hypovolemia was associated with the protection of arterial pressure and stroke volume and an increase in cerebral blood flow velocity oscillations, accounting for the reduction in the reporting of symptoms.
- 5 Development of a decision-assist algorithm to advance the capabilities of combat medics in distinguishing a bleeding from an active soldier from a remote monitoring location.



**U.S. Army Medical Research and Materiel Command**

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**Rupp, Tracy Lynn**

**1/23/2006 9/14/2008**

- 1 Sleep extension improves alertness and performance during and following 7 nights of subsequent sleep restriction
- 2 Prior sleep extension facilitates learning of a mathematical processing task during sleep restriction and recovery
- 3 Risk-taking behavior is elevated during recovery from sleep restriction
- 4 Negative mood alterations with sleep restriction persist into recovery

**Shiraki, Hiroaki**

**11/13/2006 5/31/2008**

- 1 Designed and synthesized a series of new and active 8-aminoquinoline antimalarials which are potentially devoid of lethal hemolysis side effects.
- 2 Improved or developed new and facile methods for preparation of 5-aryl-8-aminoquinoline antimalarials.
- 3 Prepared a manuscript for publication.

**Swanson, Katherine Irene**

**11/21/2005 12/31/2007**

- 1 Sequence analysis of sand fly pools for *Leishmania* *gpi* gene fragment yielded mainly *L. tarentolae* and a non-*Leishmania* sequence similar to *Anopheles gambiae gpi*.
- 2 Medically-important *Leishmania* sequences (*L. major*, *L. Tropica*, *L. infantum*) were identified from sand fly pools from Iraq and Afghanistan. In addition, a sequence similar to both *L. major* and *L. tropica* was identified.
- 3 Confirmatory sequencing for *Leishmania* using the internal transcribed spacer (ITS) fragment was unsuccessful due to variations within sequence. However, *Leishmania* was detected through PCR for the ITS fragment.
- 4 Working through a CRADA with Human Genetic Signatures, INA Technology has been utilized to develop blocking primers for the non-*Leishmania* sequences in order to determine whether *Leishmania* sequences can be obtained from the samples.
- 5 A fragment of cytochrome c oxidase I was amplified from sand fly genomic DNA for the identification of sand fly species using a combination of real time PCR with SYBR Green and Melting Curve Analysis.

**Takhampunya, Ratre**

**12/04/2006 12/03/2007**

- 1 The binding capability of Dengue virus (DEN) serotype 1-4 to the DCSIGN receptor on Raji cells between 8 Dengue fever (DF) strains and 10 dengue hemorrhagic fever (DHF) strains has no significant difference.
- 2 The Dengue virus predominant strains trend to bind to DCSIGN receptor on Raji cells better than non-predominant strains.
- 3 Within DEN-1 the binding and internalization abilities of DHF strain (ThD1-0323/91) and DF strain (ThD1-0488/94) to human Dendritic cells (3 donors) has no significant difference when compared the amount of virus bound to receptors on human DCs.
- 4 Studying the replication rates of 18 isolates of DEN in human DCs cells, we found that DHF strains replicate more efficient than DF strains when compared the production of virus titer from human DCs (3-5 donors) at 48 hr post-infection.

b) Books, book chapters, other publications

Jayendra B. Bhonsle, and Donald Huddler.

QSAR: A powerful tool for drug design in combating infectious diseases.

Invited Book Chapter in "Genomic and Computational Tools for Emerging Infectious Diseases"

Edited by Willy Valdivia-Granda; Springer Science+Business Media, Inc., New York, NY, USA.

Communicated/Submitted. Anticipated publication date is in early 2008.

c) Manuscripts in preparation, manuscripts submitted

1) Jayendra B. Bhonsle, and Donald Huddler

A comparative study of 3D-QSAR models of bacterial Enoyl Acyl Carrier Protein Reductase (FabI) inhibitors. Journal of Chemical Information and Modeling (2008) in preparation.

2) Jayendra B. Bhonsle, Norman Waters, and Donald Huddler.

A comparative study of 3D-QSAR models of Plasmodial falciparum betaKetoacyl ACP Synthase III (pfKASIII) inhibitors.

Journal of Chemical Information and Modeling (2008) in preparation.

3) Jayendra B. Bhonsle, Tiffany N. Heady, Geoffrey S. Dow, and Donald Huddler

A comparative study of 3D-QSAR models of Mefloquine based antimalarials.

Quantitative Structure Activity Relationships and Combinatorial Chemistry (2008) Communicated/Submitted.

10) PATENT OR COPYRIGHT APPLICATIONS RESULTING FROM THE NRC ASSOCIATESHIP RESEARCH PROGRAM

Provide titles, inventors, and dates of applications.

Novel Anti-microbial Peptidomimetic Compounds and Methods to Calculate Anti-microbial activity.

Rickey P. Hicks, Jayendra B. Bhonsle, and Divakaramenon Venugopal

Filed on December 20, 2007.

11) PRESENTATIONS AT SCIENTIFIC MEETINGS OR CONFERENCES

Provide complete references: author(s), title, abstract/proceeding citation, meeting name and location.

International

1) Jayendra B. Bhonsle and Michael P. Kozar

Title of Talk: Computational methods to Drug Design and Discovery.

Invited Talk: 5th YoungChem 2007 International Conference of Young Chemists. Jurata, Poland.

October 10 – October 14, 2007

2) Jayendra B. Bhonsle and Donald Huddler

Novel Method For Mining QSPR Relevant Conformations.

Keynote address at International Conference on Modeling in Chemical and Biological Engineering Sciences. Bangkok, Thailand. October 25 – October 27, 2006

3) Jayendra B. Bhonsle, Raj K. Gupta, and Apurba K. Bhattacharjee

Title of Poster: QSAR studies of insect repellents and design of better insect repellent: An automated approach for QSAR model development of insect repellents.

XVIth International Congress for Tropical Medicine and Malaria. Marseilles, France.

September 11- September 15, 2005.

4) Jayendra B. Bhonsle, Raj K. Gupta, and Apurba K. Bhattacharjee

Title of Poster: QSAR studies of insect repellents and design of better insect repellent. A semi-automated approach for predictive QSAR model of insect repellents using scripted common molecular modeling tools and a novel method for test set compounds activity prediction.

Fourth Indo-US Conference on Mathematical Chemistry. Pune, India.

January 8 - January 12, 2005.

Domestic

- 1) Jayendra B. Bhonsle and Donald Huddler  
A comparative study of 3D- QSAR models of bacterial Enoyl Acyl Carrier Protein Reductase (FabI) inhibitors.  
Invited oral paper presentation at the Accelrys Users Meeting & Conference 2006, Baltimore, MD. November 14, 2006.
- 2) Jayendra B. Bhonsle and Apurba K. Bhattacharjee  
Title of Poster: QSAR studies of bacterial Enoyl Acyl Carrier Protein Reductase (FabI)  
ASTMH 54th Annual Meeting. Washington D.C. December 11- December 15, 2005
- 3) Jayendra B. Bhonsle, Raj K. Gupta, and Apurba K. Bhattacharjee  
Title of Poster: QSAR studies of insect repellents and design of better insect repellent: Insights into mechanism of action of DEET analogs.  
PharmaDiscovery 2005. Washington, D.C. May 10 - May 12, 2005

- 12) *SEMINARS OR LECTURES DELIVERED AT UNIVERSITIES AND/OR INSTITUTES* Include dates, names and locations of seminars.
- November 13, 2006. Title of Talk: Computational Methods for Drug Design and Discovery. Invited for Seminar at the "COLLOQUIUM OF THE COMPUTATIONAL MATERIALS SCIENCE CENTER College of Science", Computational Materials Science Center, George Mason University, Fairfax, VA.

- 13) *PROFESSIONAL AWARDS RECEIVED DURING TENURE*

None

- 14) *POST-TENURE POSITION TITLE*

Senior Research Scientist

- 15) *POST-TENURE ORGANIZATION* Provide name and city of organization.

Walter Reed Army Institute of Research, Silver Spring, Maryland.

- 16) *POST-TENURE POSITION STATUS / CATEGORY* Please indicate only one.

- ☐ Remain at Host Agency as Permanent Employee  
☒ Remain at Host Agency as Contract/Temporary Employee  
Abbreviate Host Laboratory/Center WRAIR  
☐ Research Position at Another US Government Laboratory  
☐ Administrative Position at US Government Laboratory  
☐ Research Position at Foreign Government Laboratory

- ☐ Research/Teaching at US College/University  
☐ Research/Teaching at Foreign College/University  
☐ Research/Administration in Industry  
☐ Research/Admin in Non-Profit Organization  
☐ Postdoctoral Research  
☐ Self Employed  
☐ Other: specify \_\_\_\_\_

## 17) APPRAISAL OF NRC RESEARCH ASSOCIATESHIP PROGRAM

On a scale of 1 - 10 (poor - excellent), please rate the following:

SHORT TERM VALUE

- 10 Development of knowledge, skills, and research productivity  
Comments

LONG TERM VALUE

- 10 How the National Academies Associateship award affected your career to date  
Comments

LAB SUPPORT

- 7 Quality of support--equipment, funding, orientation, safety and health guidelines, etc.  
Comments

ADVISER / MENTOR SUPPORT

- 8 Quality of mentoring from the Lab NRC Adviser (USMA Mentor, if applicable)  
Comments

LPR SUPPORT

- 8 Quality administrative support from the LPR  
Comments

NRC SUPPORT

- 7 Quality of administrative support from the NRC  
Comments

18) PLEASE PROVIDE ANY SUGGESTIONS FOR PROGRAM IMPROVEMENT.

US Postal Service mailing address  
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website  
[www.national-academies.org/rap](http://www.national-academies.org/rap)  
Research Associateship Programs

CC:

Express Delivery address  
Research Associateship Programs  
The National Academies  
2001 Wisconsin Avenue, NW [GR 322A]  
Washington, DC 20007

Rev. 08/2006  
cost-center #

Warfield KL, Bradfute SB, Wells J, Loftis L, Cooper MT, Alves DA, Reed DK, VanTongeren SA, Mech CA, and Bavari S. Development and characterization of a mouse model for marburgvirus. In preparation.

Reduced CD45 expression levels paradoxically protect against Bacillus anthracis and Ebola infection. In preparation. Panchal RG, Bradfute SB, Ulrich R, Warfield KL, Ruthell G, Peyser BG, Lane D, Kenny TA, Iversen PL, Anderson AO, Raschke WC, Bavari S.

Bradfute SB, Bavari S, Bray M, Hotchkiss RL. Lymphocyte death in viral infection. Review, in preparation.

10) *PATENT OR COPYRIGHT APPLICATIONS RESULTING FROM NRC ASSOCIATESHIP RESEARCH*  
Provide titles, inventors, and dates of applications.

N/A

11) *PRESENTATIONS AT SCIENTIFIC MEETINGS OR CONFERENCES*

Provide complete references: author(s), title, abstract/proceeding citation, meeting name and location.

**International**

Bradfute SB, Braun DR, Shamblin JD, Geisbert JB, Paragas J, Garrison A, Hensley LE, and Geisbert TW. Lymphocyte death in a mouse model of Ebola virus infection. Filovirus 2006, Winnipeg, Canada

**Domestic**

Bradfute SB, Warfield KL, and Bavari S. Functional CD8+ T cell responses in lethal Ebolavirus infection. Viral Immunity, Keystone Symposia (2008).

Bradfute SB, Warfield KL, and Bavari S. Functional CD8+ T cell responses in lethal Ebolavirus infection. 2007 Biodefense Research Conference (2007).

12) *SEMINARS OR LECTURES DELIVERED AT UNIVERSITIES AND/OR INSTITUTES* Include dates, names and locations of seminars.

13) *PROFESSIONAL AWARDS RECEIVED DURING TENURE*

NCI Spring Research Festival Outstanding Poster Award, 2007

14) *POST-TENURE POSITION / JOB TITLE*

ORISE Postdoctoral Fellow

15) *NAME AND ADDRESS OF POST-TENURE POSITION / JOB ORGANIZATION*

Bacteriology Division, USAMRIID, 1425 Porter St, Ft. Detrick, MD 21702

16) *POST-TENURE POSITION STATUS / CATEGORY* Please indicate only one.

- ☐ Remain at Host Agency as Permanent Employee  
☒ Remain at Host Agency as Contract/Temporary Employee

Abbreviate Host Laboratory/Center \_\_\_\_\_

- ☐ Research Position at Another US Government Laboratory  
☐ Administrative Position at US Government Laboratory  
☐ Research Position at Foreign Government Laboratory

- ☐ Research/Teaching at US College/University  
☐ Research/Teaching at Foreign College/University  
☐ Research/Administration in Industry  
☐ Research/Administration in Non-Profit Organization  
☐ Postdoctoral Research  
☐ Self Employed  
☐ Other: specify \_\_\_\_\_

17) *APPRAISAL OF RESEARCH ASSOCIATESHIP PROGRAM*

On a scale of 1 – 10 (poor - excellent), please rate the following:

SHORT TERM VALUE

2 Development of knowledge, skills, and research productivity  
Comments

Dr. Geisbert, and his close associate, Dr. Hensley, contributed very little to my knowledge or research productivity. They did not like independent thought, which is the cornerstone of scientific progress. I did learn very good BSL-4 techniques from Dr. Geisbert's wife, Joan.

LONG TERM VALUE

4 How the NRC Associateship award affected your career to date  
Comments



I consider a "4" a high mark for this laboratory. I rate them this highly because the very difficult experience I had made me much tougher, which in the long run is probably a good thing.

#### LAB SUPPORT

2 Quality of support from the Laboratory--equipment, funding, orientation, safety and health guidelines, etc.

##### Comments

Dr. Geisbert would tell me that they didn't have any funds for me to order supplies, then the next day I would see one of his students ordering thousands of dollars of supplies. They get one point for Joan Geisbert training me well in BSL-4 technique.

#### ADVISER/MENTOR SUPPORT

1 Quality of mentoring from the Laboratory NRC Adviser (USMA Mentor, if applicable)

##### Comments

Dr. Geisbert is not a very good scientist. He generally did not care to discuss science with me, and on the rare occasions we did talk science, his comments generally fluctuated between useless and misguided. Dr. Hensley was no better in this regard, mostly because she did not want to consider any opinions other than her own.

#### LPR SUPPORT

9 Quality of administrative support from the Laboratory (e.g., NIST) NRC Program Representative (LPR)

##### Comments

During this time Dr. Bavari was the LPR and he did a good job.

#### NRC SUPPORT

8 Quality of administrative support (applications, inquiries, post-review, award-related, travel, etc.) from the NRC

##### Comments

In general, a fantastic administrative support experience. Towards the end of my tenure I had some problems with reimbursement for scientific travel, but nothing serious.

#### 18) PLEASE PROVIDE ANY SUGGESTIONS FOR PROGRAM IMPROVEMENT.

Although Dr. Geisbert is no longer at USAMRIID, Dr. Hensley is. I always considered them to be basically the same person, as neither operated independently of the other. Although I will not delve too deeply in the labyrinthine nightmare that was my Geisbert/Hensley experience, I will say that neither cared for science or the progress of others. Although it soon became apparent that both of them had serious issues with me, I was never approached by them to discuss these issues, and when I asked Dr. Geisbert if he had any problems with me, he did not answer. But those issues aside, the main problem with Dr. Geisbert and Dr. Hensley can be summed up by noting that of the four NRCs that have worked directly for them in the lab (Kris Curtis, Elizabeth Fritz, myself, and currently Anna Honko), there has been only one first-author paper from that group. This paper came from me, and it took months of persistent effort on my part to get this paper submitted. I am not the brightest scientist, but I was able to get this paper published probably because I was more stubborn than Dr. Geisbert and Dr. Hensley. I strongly recommend that no other NRC work for Dr. Hensley.

#### Mail & Delivery Address

It is NOT necessary to mail the original.  
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NRC Research Associateship Programs  
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Washington, DC 20001

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If link does not connect, unprotect Word doc,  
or do "Ctrl Click"  
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Suggestions for, or problems  
with, forms should be directed to  
the forms manager, Suzanne  
White, [swhite@nas.edu](mailto:swhite@nas.edu).

ID# 0400270

CC#

1. Bobrov, A.G., X. Huang, E. Garcia, L.E. Lindler, and A.A. Filippov. Clustering of global typical and pestoides strains of *Yersinia pestis* by using IS285. Manuscript in preparation, to be submitted to J. Clin. Microbiol.

2. Filippov, A.A., X. Huang, K.V. Sergueev, R.B. Lathigra, R.H. Borschel, and M.P. Nikolich. Plague diagnostic bacteriophages Phi A1122 and L-413C as potential therapeutics. Manuscript in preparation, to be submitted to Antimicrob. Agents Chemother.

10) *PATENT OR COPYRIGHT APPLICATIONS RESULTING FROM NATIONAL ACADEMIES ASSOCIATESHIP RESEARCH*  
Provide titles, inventors, and dates of applications.

11) *PRESENTATIONS AT SCIENTIFIC MEETINGS OR CONFERENCES*

Provide complete references: author(s), title, abstract/proceeding citation, meeting name and location.

International

1. Bakhteeva, I.V., G.M. Titareva, T.B. Kravchenko, S.G. Abbasova, E.A. Panfertsev, S.V. Den-tovskaya, S.A. Ivanov, K.K. Amoako, R.D. Perry, and A.A. Filippov. 2006. Cytotoxic, mitogenic and adhesive activities of *Yersinia pestis* pH 6 antigen. 9th International Symposium on *Yersinia* (Lexington, Kentucky, Oct. 10-14, 2006). Abstracts, p. 55.

2. Bobrov, A.G., X. Huang, E. Garcia, L.E. Lindler, and A.A. Filippov. 2006. Clustering of global typical and pestoides strains of *Yersinia pestis* by IS285 fingerprinting. Ibid., p. 67.



Domestic

Bobrov, A.G., X. Huang, E. Garcia, L.E. Lindler, and A.A. Filippov. 2006. Genotyping of global *Yersinia pestis* isolates by using IS285. 25th Army Science Conference (Orlando, Florida, Nov. 27-30, 2006). Manuscript KP-38, published online (<http://www.asc2006.com/posters/KP-38.pdf>).

12) *SEMINARS OR LECTURES DELIVERED AT UNIVERSITIES AND/OR INSTITUTES* Include dates, names and locations of seminars.

Filippov, A.A. Ongoing Research at WRAIR on Plague Phage Therapy & Its Potential Perspectives. Military Infectious Disease Strategy Meeting, Walter Reed Army Institute of Research, Silver Spring, MD, December 3, 2007.

13) *PROFESSIONAL AWARDS RECEIVED DURING TENURE*

14) *POST-TENURE POSITION TITLE*

Research Microbiologist

15) *POST-TENURE ORGANIZATION* Provide name and address of organization.

Walter Reed Army Institute of Research, 503 Robert Grant Avenue, Silver Spring, MD, 20910.

16) *POST-TENURE POSITION STATUS / CATEGORY* Please indicate only one.

- ☐ Remain at Host Agency as Permanent Employee  
☒ Remain at Host Agency as Contract/Temporary Employee  
Abbreviate Host Laboratory/Center WRAIR  
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- ☐ Research/Teaching at US College/University  
☐ Research/Teaching at Foreign College/University  
☐ Research/Administration in Industry  
☐ Research/Administration in Non-Profit Organization  
☐ Postdoctoral Research  
☐ Self Employed  
☐ Other: specify \_\_\_\_\_

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SHORT TERM VALUE

- 9 Development of knowledge, skills, and research productivity  
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LONG TERM VALUE

- 10 How the National Academies Associateship award affected your career to date  
Comments

LAB SUPPORT

- 10 Quality of support--equipment, funding, orientation, safety and health guidelines, etc.  
Comments

ADVISER/MENTOR SUPPORT

- 10 Quality of mentoring from the Lab NRC Adviser (USMA Mentor, if applicable)

Comments

LPR SUPPORT

- 10 Quality administrative support from the LPR  
Comments

NRC SUPPORT

- 10 Quality of administrative support from the NRC  
Comments

18) *PLEASE PROVIDE ANY SUGGESTIONS FOR PROGRAM IMPROVEMENT.*

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Research Associateship Programs  
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THIS FORM SHOULD BE E-MAILED  
directly to your NRC coordinator  
website

Express Delivery address  
Research Associateship Programs  
The National Academies

2. Ghosh, K., Mukhopadhyay, J., Weina, P., Braig, H. and Rowton, E. (2008). Identification of sympatric population of sandflies using 12S variation (to be communicated in J. Med. Entomology).

3. Lucie Lantová, Kashinath Ghosh, Petr Volf, Milena Svobodová, Edgar Rowton, Peter Weina, Henk Braigh and Jan Votýpka (2008) The life cycle and host specificity of *Phlebotomus sergenti* sp. n. and *Ph. tobbi* sp. n. (Protozoa: Apicomplexa: Neogregarinida) in sand flies *Phlebotomus sergenti* and *P. tobbi* (Diptera: Psychodidae) (to be communicated in J. Invert. Pathology)

10) *PATENT OR COPYRIGHT APPLICATIONS RESULTING FROM NATIONAL ACADEMIES ASSOCIATESHIP RESEARCH*  
Provide titles, inventors, and dates of applications.

11) *PRESENTATIONS AT SCIENTIFIC MEETINGS OR CONFERENCES*  
Provide complete references: author(s), title, abstract/proceeding citation, meeting name and location.  
International

## Domestic

1. K. Ghosh, H.R. Braig, P. Lawyer, P. Weina and E. Rowton (2007) Molecular identification of the gregarines of phlebotomine sand flies- to be presented at the American Society of Tropical Medicine and Hygiene, 2007-Philadelphia-Oral presentation.
2. Mendez, J., Ghosh, K. and Weina, P. (2007) Rapid diagnosis of human leishmaniasis species using a rapid cellulose acetate electrophoresis (CAE).- to be presented at the American Society of Tropical Medicine and Hygiene, 2007-Philadelphia-poster presentation.
3. Read, A.L., Durvasula, R., Hurwitz, I., Subhadra, B., Scott, M., Ghosh, K., McKelvey, R., Hillesland, H. and Das P. (2007) A paratransgenic approach to control of visceral leishmaniasis: Aerobic gut bacterial identification from *Phlebotomus argentipes*- to be presented at the American Society of Tropical Medicine and Hygiene, 2007-Philadelphia-Oral presentation.
4. K. Ghosh, Juan Mendez and Peter J Weina (2008) Genetic polymorphism in the visceralizing gene sequence of *Leishmania tropica* isolated from the soldiers returning from Iraq- to be presented at the American Society of Tropical Medicine and Hygiene, 2008-New Orleans-Oral presentation.
5. Juan Mendez, Ioana Brasov, Kashinath Ghosh, Peter J Weina, Victor Melendez and Adelfa Serrano (2008) Characterization of a Rare Equine *Leishmania* in Puerto Rico; Native or Imported? to be presented at the American Society of Tropical Medicine and Hygiene, 2008-New Orleans-poster presentation.

12) *SEMINARS OR LECTURES DELIVERED AT UNIVERSITIES AND/OR INSTITUTES* Include dates, names and locations of seminars.

13) *PROFESSIONAL AWARDS RECEIVED DURING TENURE*

14) *POST-TENURE POSITION TITLE*

Research Scientist

15) *POST-TENURE ORGANIZATION* Provide name and address of organization.

WRAIR

16) *POST-TENURE POSITION STATUS / CATEGORY* Please indicate only one.

- |  |   |
|--|---|
| <input type="checkbox"/> Remain at Host Agency as Permanent Employee                     | <input type="checkbox"/> Research/Teaching at US College/University         |
| <input checked="" type="checkbox"/> Remain at Host Agency as Contract/Temporary Employee | <input type="checkbox"/> Research/Teaching at Foreign College/University    |
| Abbreviate Host Laboratory/Center <u>LDL/ WRAIR</u>                                      | <input type="checkbox"/> Research/Administration in Industry                |
| <input type="checkbox"/> Research Position at Another US Government Laboratory           | <input type="checkbox"/> Research/Administration in Non-Profit Organization |
| <input type="checkbox"/> Administrative Position at US Government Laboratory             | <input type="checkbox"/> Postdoctoral Research                              |
| <input type="checkbox"/> Research Position at Foreign Government Laboratory              | <input type="checkbox"/> Self Employed                                      |
|  | <input type="checkbox"/> Other: specify _____                               |

17) *APPRAISAL OF RESEARCH ASSOCIATESHIP PROGRAM*

On a scale of 1 – 10 (poor – excellent), please rate the following:

### SHORT TERM VALUE

- ☒ Development of knowledge, skills, and research productivity

#### Comments

I was able to learn few additional skill but was able to work in the same field and was able to utilize the skill in the same field which enabled to get good reasearch productivity.

### LONG TERM VALUE

- ☒ How the National Academies Associateship award affected your career to date

#### Comments

This will help to develop my future career down the line of leishmaniasis research.

### LAB SUPPORT

- ☒ Quality of support--equipment, funding, orientation, safety and health guidelines, etc.

#### Comments

Too much safety rules which takes too much times. Not Administrative support friendly. Hardly got any technical support.

### ADVISER/MENTOR SUPPORT

- ☒ Quality of mentoring from the Lab NRC Adviser (USMA Mentor, if applicable)

#### Comments

I can only say that I got full support from the adviser and he was cooperative and helpful.

LPR SUPPORT

9 Quality administrative support from the LPR

**Comments**

**Dr. Rothman's office is always helpful and cooperative.**

NRC SUPPORT

9 Quality of administrative support from the NRC

**Comments**

**Always friendly and supportive.**

18) *PLEASE PROVIDE ANY SUGGESTIONS FOR PROGRAM IMPROVEMENT.*

I believe the program is good except few administrative delay (may be an exception), however, in WRAIR, the quality of administrative and technical support should be more friendly and research directed like a true Research Institution.

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**website**

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The National Academies

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Washington, DC 20007

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Research Associateship Programs

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b) Books, book chapters, other publicationsc) Manuscripts in preparation, manuscripts submitted

1. Aerosol exposure to the Angola strain of Marburg virus causes lethal viral hemorrhagic fever in cynomolgus macaques.
2. Aerosol exposure to the Zaire strain of Ebola virus causes lethal viral hemorrhagic fever in African green monkeys, rhesus macaques, and cynomolgus macaques.
3. Aerosolized *Francisella tularensis* in three species of non-human primates.

10) PATENT OR COPYRIGHT APPLICATIONS RESULTING FROM THE NRC ASSOCIATESHIP RESEARCH PROGRAM  
Provide titles, inventors, and dates of applications.11) PRESENTATIONS AT SCIENTIFIC MEETINGS OR CONFERENCES

Provide complete references: author(s), title, abstract/proceeding citation, meeting name and location.

International

Cellular immune response following mitogenic stimulation of peripheral blood mononuclear cells from African green monkey, cynomolgus macaques, and rhesus macaques,

Audrey R. Glynn and Doug Reed

ImmunoRio 2007, Rio de Janeiro, Brazil

Licensure of vaccines for protection against several select agents will only be possible via the animal rule; performing pivotal efficacy studies in the animal model that best resembles the human. Most frequently the non-human primate (NHP) is the most ideal model for human disease. The goals of the studies shown here are to acquire a better understanding of the immunological response of the cynomolgus macaque, rhesus macaque, and African green monkey (AGM) to aid in choosing an animal model for vaccine studies. Not every NHP species mimics human disease pathology and/or human immune responses, and this can vary from disease to disease. To better understand the cellular arm of the immune responses, peripheral blood mononuclear cells (PBMCs) previously stimulated with mitogens, staphylococcal enterotoxin B (SEB) or *E. coli* lipopolysaccharide (LPS), were compared using intracellular cytokine staining. After SEB treatment of PBMCs from rhesus macaques and AGM, a large increase was seen in the number of cells doubly positive for CD8 and one of the Th1 cytokines IFN- $\gamma$ , TNF- $\alpha$ , or IL-2, whereas little to no increase was observed in the cynomolgus macaque. Of the CD4+ cells from rhesus and AGM, an increase in cells doubly positive for IL-4 was seen, whereas in the cynos, CD4+IL-4+ cells decreased after treatment. After LPS treatment, no changes were observed in the T-cell populations in both the rhesus and cynomolgus macaques, whereas in the AGM increases were observed in CD3+ cells doubly positive for IL-10, TNF- $\alpha$ , and IFN- $\gamma$ . These evaluations will become particularly relevant when similar studies of human PBMCs are performed and the responses are compared and contrasted against the animal species.

Domestic

12) SEMINARS OR LECTURES DELIVERED AT UNIVERSITIES AND/OR INSTITUTES Include dates, names and locations of seminars.

13) PROFESSIONAL AWARDS RECEIVED DURING TENURE

14) POST-TENURE POSITION / JOB TITLE

AAAS Fellow in the International Liaison Office, Office of Naval Research Global, Dept of the Navy

15) NAME & ADDRESS OF POST-TENURE POSITION / JOB ORGANIZATION

ONR Global

875 North Randolph Street, Suite 1425

Arlington VA 22203

16) POST-TENURE POSITION STATUS / CATEGORY Please indicate only one.

- ☐ Remain at Host Agency as Permanent Employee  
☐ Remain at Host Agency as Contract/Temporary Employee  
☐ Abbreviate Host Laboratory/Center \_\_\_\_\_  
☐ Research Position at Another US Government Laboratory  
☐ Administrative Position at US Government Laboratory  
☐ Research Position at Foreign Government Laboratory

- ☐ Research/Teaching at US College/University  
☐ Research/Teaching at Foreign College/University  
☐ Research/Administration in Industry  
☐ Research/Admin in Non-Profit Organization  
☐ Postdoctoral Research  
☐ Self Employed  
☒ Other: specify AAAS fellow

## 17) APPRAISAL OF RESEARCH ASSOCIATESHIP PROGRAM

On a scale of 1 – 10 (poor – excellent), please rate the following:

SHORT TERM VALUE

- 8 Development of knowledge, skills, and research productivity  
Comments

LONG TERM VALUE

- 10 How the NRC Associateship award affected your career to date  
Comments

LAB SUPPORT

- 8 Quality of support from the Laboratory—equipment, funding, orientation, safety and health guidelines, etc.  
Comments

ADVISER/MENTOR SUPPORT

- 9 Quality of mentoring from the Laboratory NRC Adviser (USMA Mentor, if applicable)  
Comments

LPR SUPPORT

- 8 Quality of administrative support from the Laboratory (e.g., NIST) NRC Program Representative (LPR)  
Comments

NRC SUPPORT

- 7 Quality of administrative support (applications, inquiries, post-review, award-related, travel, etc.) from the NRC  
Comments

18) PLEASE PROVIDE ANY SUGGESTIONS FOR PROGRAM IMPROVEMENT.

Mail & Delivery Address

It is NOT necessary to mail the original.

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500 Fifth Street NW, #568  
Washington, DC 20001

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manager, Suzanne White,  
swhite@nas.edu.

ID# 0511510

CC#



b) Books, book chapters, other publications

"Targeting the malaria kinome: discovering kinase inhibitors as novel anti-malarial agents". Dayadevi Jirage, Susan Keenan and Norman C. Waters. In: Drug Discovery in Infectious Diseases, Wiley-VCH Publishers.  
Accepted for publication

c) Manuscripts in preparation, manuscripts submitted

"A Dual Role for the Malarial CDK Effector protein PfMAT1" Dayadevi Jirage, Yueqin Chen, Richard A. Dennull, Edison A. Cortes, Diana Caridha, and Norman C. Waters. Communicated

10 *PATENT OR COPYRIGHT APPLICATIONS RESULTING FROM THE NRC ASSOCIATESHIP RESEARCH PROGRAM*  
Provide titles, inventors, and dates of applications.

11) *PRESENTATIONS AT SCIENTIFIC MEETINGS OR CONFERENCES*

Provide complete references: author(s), title, abstract/proceeding citation, meeting name and location.

International

Domestic

Towards Understanding the Role of the CDK Pfmrk in the Regulation of the Malarial Cell Cycle  
Dayadevi Jirage, Edgie-Mark Co, Michael O'Neil, Drew Reinbold-Wasson, William Witola, Ben Mamoun Choukri and Norman Waters  
Molecular Parasitology meeting, Woods Hole Massachussetts September 2008

Studies on CDK Regulation in Malaria

Dayadevi Jirage, Edgie-Mark Co, Yueqin Chen, Diana Caridha, Richard A. Dennull, Drew Reinbold, and Norman C. Waters

Meeting of the American Society of Tropical Medicine and Hygiene, Philadelphia, November 2007

Identification of an effector protein and gain-of-function mutants of Pfmrk - a malarial cyclin dependent protein kinase

Dayadevi B. Jirage, Yueqin Chen, April K. Kathart, Edison A. Cortes, Richard A. Dunnell, Jeanne A. Geyer, Sean T. Prigge and Norman C. Waters

Keystone Symposium on Malaria Drug Discovery, Taos, New Mexico, March 2006

12) SEMINARS OR LECTURES DELIVERED AT UNIVERSITIES AND/OR INSTITUTES Include dates, names and locations of seminars.

13) PROFESSIONAL AWARDS RECEIVED DURING TENURE

14) POST-TENURE POSITION / JOB TITLE

Research Molecular Biologist, Clinical Research Management at WRAIR

15) NAME & ADDRESS OF POST-TENURE POSITION / JOB ORGANIZATION  
503, ROBERT GRANT AVENUE,  
2N55, ET/Parasitology WRAIR Silver Spring MD 20910  
C

16) POST-TENURE POSITION STATUS / CATEGORY Please indicate only one.

- ☐ Remain at Host Agency as Permanent Employee  
☒ Remain at Host Agency as Contract/Temporary Employee  
Abbreviate Host Laboratory/Center WRAIR  
☐ Research Position at Another US Government Laboratory  
☐ Administrative Position at US Government Laboratory  
☐ Research Position at Foreign Government Laboratory

- ☐ Research/Teaching at US College/University  
☐ Research/Teaching at Foreign College/University  
☐ Research/Administration in Industry  
☐ Research/Admin in Non-Profit Organization  
☐ Postdoctoral Research  
☐ Self Employed  
☐ Other: specify \_\_\_\_\_

17) APPRAISAL OF RESEARCH ASSOCIATESHIP PROGRAM

On a scale of 1–10 (poor – excellent), please rate the following:

SHORT TERM VALUE

- 8 Development of knowledge, skills, and research productivity  
Comments

LONG TERM VALUE

- 7 How the NRC Associateship award affected your career to date  
Comments

LAB SUPPORT

- 8 Quality of support from the Laboratory--equipment, funding, orientation, safety and health guidelines, etc.  
Comments

ADVISER/MENTOR SUPPORT

- 9 Quality of mentoring from the Laboratory NRC Adviser (USMA Mentor, if applicable)  
Comments

Dr. Waters provided extraordinary support and mentoring to during my tenure. He also provided me with numerous career-building opportunities. Even though he left for Australia last year, he continued to guide my research.

LPR SUPPORT

- 9 Quality of administrative support from the Laboratory (e.g., NIST) NRC Program Representative (LPR)  
Comments

NRC SUPPORT

- 9 Quality of administrative support (applications, inquiries, post-review, award-related, travel, etc.) from the NRC  
Comments

18) PLEASE PROVIDE ANY SUGGESTIONS FOR PROGRAM IMPROVEMENT.

Prospective NRC Fellows considering a tenure at WRIAR or similar institutes with PIs in the military **SHOULD** be made aware that most military scientists move every two to three years. The resulting change in leadership/environment may not always be favorable for the quality of research.

Mail & Delivery Address

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swhite@nas.edu.

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11) *PRESENTATIONS AT SCIENTIFIC MEETINGS OR CONFERENCES*

Provide complete references: author(s), title, abstract/proceeding citation, meeting name and location.

**International**

1. Muza, S.R., Fulco C.S., Beidleman B.A., Jones, J.E., Staab, J.E., Elliott, S., Money, A. and Cymerman, A. 2007. Ventilatory acclimatization during and following normobaric intermittent hypoxic exposures in lowlanders. Mountain and Wilderness Medicine World Congress 2007
2. Jones, J.E., Muza, S.R., Fulco, C.S., Beidleman, B.A., Tapia, M.L., Lammi, E.R., Elliott, L.D. and Cymerman, A. 2007. Poster: Normobaric intermittent hypoxic exposures improve foot march performance at 4300 M. The 15th International Hypoxia Symposium, Lake Louise, Canada. High Altitude Medicine & Biology. 2006, 7(4): 319-350.
3. Beidleman, B.A., Muza, S.R., Fulco, C.S., Staab, J., Lammi, E.R., Jones, J.E., and Cymerman, A. 2007. Poster: Normobaric intermittent hypoxic exposures does not alter cardiorespiratory responses during steady-state exercise at 4300 M. The 15th International Hypoxia Symposium, Lake Louise, Canada. High Altitude Medicine & Biology. 2006, 7(4): 319-350.

**Domestic**

1. Staab, J.E., Muza, S.R., Beidleman B.A., Fulco C.S., Staab J.S., Jones J., Reese, M.L., and Cymerman, A. 2008. Erythropoietin (EPO) and Soluble Transferrin Receptor (sTfR) Responses at 4300 m Before and After Normobaric Intermittent Hypoxic Exposure. Experimental Biology Annual Meeting.
  2. Muza, S.R., Fulco C.S., Beidleman B.A., Jones, J.E., Staab, J.E., Elliott, S., Lammi, E.R., and Cymerman, A. 2008. Lowlander time trial performance at 4300 M is not improved following a normobaric intermittent hypoxic exposure program. 55th Annual meeting of the American College of Sports Medicine.
  3. Fulco C.S., Muza, S.R., Beidleman B.A., Jones, J.E., Lammi, E.R., Kambis, K., Doan, B.K., Brothers, M.D., Zupan, M.F., and Cymerman, A. 2008 Living for six days at 2200 m improves prolonged time-trial performance of sea-level residents exposed to 4300 m. 55th Annual meeting of the American College of Sports Medicine.
  4. Fulco, C.S., Muza, S.R., Beidleman, B.A., Jones, J.E., and Cymerman, A. 2007. Poster: Intermittent hypoxic exposure improves time-trial performance in hypoxia but not in normoxia. Experimental Biology.
  5. Elliott, S., Muza, S.R., Fulco, C.S., Beidleman, B.A., Tapia, M.L., Lloyd, E., Jones, J.E., and Cymerman, A. 2007. Presentation: Weapon Disassembly/Reassembly Performance Is Related To Acute Mountain Sickness And Not Hypoxemia At 4300 M. 54th Annual meeting of the American College of Sports Medicine.
- 12) *SEMINARS OR LECTURES DELIVERED AT UNIVERSITIES AND/OR INSTITUTES* Include dates, names and locations of seminars.
- Guest Lecture: Emmanuel College Monthly Science Seminar Series. High Altitude: Optimizing Physical Performance in Mountain Environments. February 2007

13) *PROFESSIONAL AWARDS RECEIVED DURING TENURE*

Professional Certification: American College of Sports Medicine. Health and Fitness Instructor® certification. Certificate number 1002307, 2006

14) *POST-TENURE POSITION / JOB TITLE*

Contract Scientist

15) *NAME AND ADDRESS OF POST-TENURE POSITION / JOB ORGANIZATION*

USARIEM, 42 Kansas St. Natick MA 01760

16) *POST-TENURE POSITION STATUS / CATEGORY* Please indicate only one.

- |  |   |
|--|---|
| <input type="checkbox"/> Remain at Host Agency as Permanent Employee                     | <input type="checkbox"/> Research/Teaching at US College/University         |
| <input checked="" type="checkbox"/> Remain at Host Agency as Contract/Temporary Employee | <input type="checkbox"/> Research/Teaching at Foreign College/University    |
| Abbreviate Host Laboratory/Center <b>USARIEM</b>   | <input type="checkbox"/> Research/Administration in Industry                |
| <input type="checkbox"/> Research Position at Another US Government Laboratory           | <input type="checkbox"/> Research/Administration in Non-Profit Organization |
| <input type="checkbox"/> Administrative Position at US Government Laboratory             | <input type="checkbox"/> Postdoctoral Research                              |
| <input type="checkbox"/> Research Position at Foreign Government Laboratory              | <input type="checkbox"/> Self Employed                                      |
|  | <input type="checkbox"/> Other: specify _____                               |

17) *APPRAISAL OF RESEARCH ASSOCIATESHIP PROGRAM*

On a scale of 1 – 10 (poor - excellent), please rate the following:

SHORT TERM VALUE

- 8 Development of knowledge, skills, and research productivity  
Comments

LONG TERM VALUE

- 5 How the NRC Associateship award affected your career to date  
Comments

LAB SUPPORT

- 9 Quality of support from the Laboratory--equipment, funding, orientation, safety and health guidelines, etc.  
Comments

ADVISER/MENTOR SUPPORT

- 10 Quality of mentoring from the Laboratory NRC Adviser (USMA Mentor, if applicable)  
Comments

LPR SUPPORT

- 10 Quality of administrative support from the Laboratory (e.g., NIST) NRC Program Representative (LPR)  
Comments

NRC SUPPORT

- 10 Quality of administrative support (applications, inquiries, post-review, award-related, travel, etc.) from the NRC  
Comments

18) PLEASE PROVIDE ANY SUGGESTIONS FOR PROGRAM IMPROVEMENT.

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**Provide complete references: author(s), title, abstract/proceeding citation, meeting name and location.**

**International**

Domestic

Picchioni, D., Carr, W. S., Krugler, A. L., Smith, K. L., Shamim, S. A., Sato, S., Braun, A. R., & Balkin, T. J. (2008, June). Baseline sleep propensity predicts individual differences in performance during subsequent sleep deprivation. Poster presentation at the Associated Professional Sleep Societies meeting, Baltimore, MD.

12) SEMINARS OR LECTURES DELIVERED AT UNIVERSITIES AND/OR INSTITUTES Include dates, names and locations of seminars.  
None.

13) PROFESSIONAL AWARDS RECEIVED DURING TENURE  
None.

14) POST-TENURE POSITION TITLE  
Not yet officially determined. Likely contr. scientist.

15) POST-TENURE ORGANIZATION Provide name and address of organization.  
Not yet officially determined. Likely WRAIR.

16) POST-TENURE POSITION STATUS / CATEGORY Please indicate only one.

- |  |   |
|--|---|
| <input type="checkbox"/> Remain at Host Agency as Permanent Employee                     | <input type="checkbox"/> Research/Teaching at US College/University         |
| <input checked="" type="checkbox"/> Remain at Host Agency as Contract/Temporary Employee | <input type="checkbox"/> Research/Teaching at Foreign College/University    |
| Abbreviate Host Laboratory/Center <b>WRAIR</b>   | <input type="checkbox"/> Research/Administration in Industry                |
| <input type="checkbox"/> Research Position at Another US Government Laboratory           | <input type="checkbox"/> Research/Administration in Non-Profit Organization |
| <input type="checkbox"/> Administrative Position at US Government Laboratory             | <input type="checkbox"/> Postdoctoral Research                              |
| <input type="checkbox"/> Research Position at Foreign Government Laboratory              | <input type="checkbox"/> Self Employed                                      |
|  | <input type="checkbox"/> Other: specify _____                               |

17) APPRAISAL OF RESEARCH ASSOCIATESHIP PROGRAM  
On a scale of 1 – 10 (poor - excellent), please rate the following:

SHORT TERM VALUE

☒ 10 Development of knowledge, skills, and research productivity  
Comments

LONG TERM VALUE

☒ 10 How the National Academies Associateship award affected your career to date  
Comments

LAB SUPPORT

☒ 10 Quality of support--equipment, funding, orientation, safety and health guidelines, etc.  
Comments

ADVISER/MENTOR SUPPORT

☒ 10 Quality of mentoring from the Lab NRC Adviser (USMA Mentor, if applicable)

Comments

Dr. Balkin was one of the best mentors I have had.

LPR SUPPORT

☒ 10 Quality administrative support from the LPR  
Comments

NRC SUPPORT

☒ 10 Quality of administrative support from the NRC  
Comments

18) PLEASE PROVIDE ANY SUGGESTIONS FOR PROGRAM IMPROVEMENT.

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Convertino VA, Ryan KL, Rickards CA, Salinas J, McManus JG, Cooke WH, Holcomb JB. Physiological and medical monitoring for en route care of combat casualties. *J Trauma* 2008 (In Press).

Cooke WH, Rickards CA, Ryan KL, Convertino VA. Autonomic compensation to simulated hemorrhage monitored with heart period variability. *Crit Care Med* 2008 (In Press).

Rickards CA, Cohen KD, Bergeron LB, Burton L, Khatri P, Lee CT, Doerr DF, Ryan KL, Cooke WH, Lurie KG, Convertino VA. Inspiratory resistance increases oscillations in cerebral blood flow velocity, reducing orthostatic symptoms during acute hypotension. *Aviat Space Environ Med* 2008 (In Press).

Ryan KL, Batchinsky AI, McManus JG, Rickards CA, Convertino VA. Changes in pulse character and mental status reflect late responses to reductions in central blood volume. *Prehosp Emerg Care* 2008 (In Press).

McManus JG, Ryan KL, Morton MJ, Rickards CA, Cooke WH, Convertino VA. Limitations of end-tidal CO<sub>2</sub> as an early indicator of central hypovolemia in humans. *Prehosp Emerg Care* 2008 (In Press).

Soller BR, Ryan KL, Rickards CA, Cooke WH, Soyemi OO, Yang Y, Crookes BA, Heard SO, Convertino VA. Oxygen saturation determined from deep muscle, not thenar tissue, is an early indicator of central hypovolemia in humans. *Crit Care Med* 2008; 36(1):176-182.

Soller BR, Soyemi OO, Yang Y, Ryan KL, Rickards CA, Walz JM, Heard SO, Convertino VA. Noninvasively measured muscle PO<sub>2</sub> is an early indicator of central hypovolemia in humans. *J Appl Physiol* 2008; 104:475-481.

Rickards CA, Convertino VA, Ryan KL, Cooke WH, Lurie KG. Inspiratory resistance delays the reporting of symptoms with central hypovolemia: association with cerebral blood flow. *Am J Physiol Regul Integr Comp Physiol* 2007; 293:R243-R250.

Rickards CA, Cohen KD, Bergeron LB, Burton L, Khatri P, Lee CT, Doerr DF, Ryan KL, Cooke WH, Convertino VA. Cerebral blood flow responses and the association with symptoms during orthostatic hypotension. *Aviat Space Environ Med* 2007; 78:653-658.

Convertino VA, Ryan KL, Rickards CA, Cooke WH, Idris AH, Metzger A, Holcomb JB, Adams BD, Lurie KG. Inspiratory resistance maintains arterial pressure during central hypovolemia: Implications for treatment of patients with severe hemorrhage. *Crit Care Med* 2007; 35(4):1145-1152.

Cooke WH, Salinas J, McManus JG, Ryan KL, Rickards CA, Holcomb JB, Convertino VA. Estimates of autonomic balance separate non-survivors from survivors of traumatic injury: implications for remote medical monitoring. *Aviat Space Environ Med* 2006; 77:1107-1112.

b) Books, book chapters, other publications

Convertino VA and Rickards CA. Human Models of Space Physiology. In: Conn PM, ed. *Source Book of Models for Biomedical Research*. Totowa: Humana Press; 2008:457-464.

c) Manuscripts in preparation, manuscripts submitted

Wendleken SM, McGrath SP, Ryan KL, Rickards CA, Convertino VA. Alterations in photoplethysmogram features track reductions in central blood volume in a human model of pre-shock hemorrhage. *Aviat Space Environ Med* 2008 (In Preparation).

Rickards CA, Ryan KL, Muniz GW, Morales GM, Convertino VA. How many heart beats are enough? A systematic assessment of data length reduction on measures of heart rate variability and complexity. *J Appl Physiol* 2008 (In Preparation).

Ryan KL, Rickards CA, Cooke WH, Convertino VA. Tracking central hypovolemia with novel heart period variability metrics. *J Appl Physiol* 2008 (In Preparation).

Cooke WH, Rickards CA, Ryan KL, Convertino VA. Uncoupling of low frequency arterial pressure and muscle sympathetic neural oscillations prior to presyncope in humans. *J Physiol* 2008 (In Preparation).

10) *PATENT OR COPYRIGHT APPLICATIONS RESULTING FROM NATIONAL ACADEMIES ASSOCIATESHIP RESEARCH*  
Provide titles, inventors, and dates of applications.

11) *PRESENTATIONS AT SCIENTIFIC MEETINGS OR CONFERENCES*

Provide complete references: author(s), title, abstract/proceeding citation, meeting name and location.

**International**

Rickards CA, Ryan KL, Cooke WH, Convertino VA. Do non-linear measures of heart rate variability (HRV) track muscle sympathetic nerve activity (MSNA) during central hypovolemia in humans? 7th International Conference on Complexity in Acute Illness, Cologne, GERMANY, June/July 2008

Ryan KL, Rickards CA, Cooke WH, Convertino VA. Tracking central hypovolemia with linear and non-linear indices of heart rate variability (HRV) in humans. 6th Congress of the International Federation of Shock Societies and the 31st Annual Conference on Shock (US Shock Society), Cologne, GERMANY, July 2008

## Domestic

- Rickards CA, Ryan KL, Muniz GW, Morales G, Convertino VA. How many heart beats are enough? A systematic assessment of data length reduction on measures of heart rate variability and complexity. Experimental Biology (EB) Meeting, San Diego CA, USA, April 2008
- Ryan KL, Rickards CA, Muniz GW, Morales G, Convertino VA. Interindividual variability in heart rate variability (HRV) and complexity (HRC) measurements. Experimental Biology (EB) Meeting, San Diego CA, USA, April 2008
- Convertino VA, Rickards CA, Ryan KL, Cooke WH. Autonomic compensation to central hypovolemia monitored with heart period variability. Experimental Biology (EB) Meeting, San Diego CA, USA, April 2008
- Rickards CA, Cohen KD, Bergeron LB, Burton L, Khatri P, Lee CT, Doerr DF, Ryan KL, Cooke WH, Lurie KG, Convertino VA. Inspiratory resistance increases oscillations in cerebral blood flow velocity, reducing orthostatic symptoms during acute hypotension. Aerospace Medical Association 79th Annual Scientific Meeting, Boston MA, USA, May 2008.
- Convertino VA, Rickards CA, Lurie KG, Ryan KL. Hyperventilation induced by severe reductions in central blood volume: the respiratory pump as a protective mechanism against hypotension. Aerospace Medical Association 79th Annual Scientific Meeting, Boston MA, USA, May 2008.
- Freeman CN, Romero SA, Rickards CA, Ryan KL, Convertino VA, Cooke WH. Inspiratory resistance increases cerebral blood velocity oscillations during standing after exercise. American College of Sports Medicine (ACSM) Annual Meeting, Indianapolis IN, USA, May 2008
- Rickards CA, Ryan KL, Convertino VA, Cooke WH. Running or bleeding? What should we measure to assist remote triage decisions in a military environment? American College of Sports Medicine (ACSM) Annual Meeting, New Orleans LA, USA, May/June 2007
- Rickards CA, Ryan KL, Cooke WH, Lurie KG, Convertino VA. Cerebral blood flow oscillations elicited by inspiratory resistance delays the reporting of orthostatic symptoms with central hypovolemia. Experimental Biology (EB) Meeting, Washington DC, USA, April/May 2007
- Ryan KL, Cooke WH, Rickards CA, Lurie KG, Convertino VA. Inspiratory resistance increases hemodynamic oscillations and tolerance to induced central hypovolemia. Experimental Biology (EB) Meeting, Washington DC, USA, April/May 2007
- Convertino VA, Ryan KL, Rickards CA, Holcomb JB, Cooke WH, Idris AH, Metzger A, Lurie KG, Adams BD. Inspiratory resistance maintains arterial pressure during central hypovolemia: Implications for treatment of combat casualties with severe hemorrhage. Proceedings of the 25th Army Science Conference, 2006.
- Rickards CA, Cohen KD, Doerr DF, Lurie KG, Convertino VA. Cerebral blood flow regulation during orthostatic hypotension. Aerospace Medicine Association 77th Annual Scientific Meeting, Orlando FL, USA, May 2006.
- Doerr DF, Cohen KD, Rickards CA, Convertino VA, Lurie KG. Breathing Mechanics of the Impedance Threshold Device. Aerospace Medicine Association 77th Annual Scientific Meeting, Orlando FL, USA, May 2006.
- Cohen KD, Rickards CA, Doerr DF, Lurie KG, Convertino VA. The effect of an inspiratory threshold device on cardiovascular compensation in orthostatically compromised subjects. Aerospace Medicine Association 77th Annual Scientific Meeting, Orlando FL, USA, May 2006.
- Convertino VA, Rickards CA, Ryan KL, Cooke WH, Lurie KG. Effects of inspiratory impedance on hemodynamic responses and tolerance to progressive reduction in central blood volume: implications for treatment of hemorrhage. Experimental Biology Meeting, San Francisco CA, USA, April 2006.
- Khatri P, Cohen KD, Rickards CA, Convertino VA. Effect of an Inspiratory Impedance Threshold Device on Cerebral Blood Flow During Orthostatic Stress. American Society for Gravitational and Space Biology (ASGSB), Reno, NV, USA, November 2005. Gravit Space Biol Bull 19:4, 2005.
- Burton BL, Cohen KD, Rickards CA, Convertino VA. Self-Reporting of Symptoms During Orthostatic Stress: Relationship to Mean Cerebral Blood Flow Velocity. American Society for Gravitational and Space Biology (ASGSB), Reno, NV, USA, November 2005. Gravit Space Biol Bull 19:14, 2005.
- Lee CT, Cohen KD, Rickards CA, Convertino VA. Cerebral Autoregulation and Orthostatic Stress. American Society for Gravitational and Space Biology (ASGSB), Reno, NV, USA, November 2005. Gravit Space Biol Bull 19:14, 2005

Bergeron LL, Cohen KD, Rickards CA, Convertino VA. "The Effect of Height on Cardiovascular Responses to Orthostasis. American Society for Gravitational and Space Biology (ASGSB), Reno, NV, USA, November 2005. Gravit Space Biol Bull 19:4, 2005.

12) SEMINARS OR LECTURES DELIVERED AT UNIVERSITIES AND/OR INSTITUTES Include dates, names and locations of seminars.

March 28, 2008 - University of Texas at San Antonio, Department of Health and Kinesiology. "The Adventures of the Little Aussie in Texas. Experiences as a Graduate Student and Postdoctoral Fellow."

March 6, 2008 - International Women's Day Celebration hosted by the Zonta Club of Kyneton, Victoria, AUSTRALIA. "Postcard from Texas. An overview of my career from PhD to Postdoctoral Fellow" (Video Presentation).

13) PROFESSIONAL AWARDS RECEIVED DURING TENURE

2007 - American Physiological Society (APS) Caroline tum Suden/Francis A. Hellebrandt Professional Opportunity Award

14) POST-TENURE POSITION TITLE

Research Assistant Professor

15) POST-TENURE ORGANIZATION Provide name and address of organization.

University of Texas at San Antonio, One UTSA Circle, San Antonio, TX 78249

Contracted to work 100% with US Army Institute of Surgical Research, 3400 Rawley E Chambers Ave, Fort Sam Houston, TX, 78234

16) POST-TENURE POSITION STATUS / CATEGORY Please indicate only one.

- ☐ Remain at Host Agency as Permanent Employee  
☒ Remain at Host Agency as Contract/Temporary Employee  
Abbreviate Host Laboratory/Center USAISR  
☐ Research Position at Another US Government Laboratory  
☐ Administrative Position at US Government Laboratory  
☐ Research Position at Foreign Government Laboratory

- ☐ Research/Teaching at US College/University  
☐ Research/Teaching at Foreign College/University  
☐ Research/Administration in Industry  
☐ Research/Administration in Non-Profit Organization  
☐ Postdoctoral Research  
☐ Self Employed  
☐ Other: specify \_\_\_\_\_

17) APPRAISAL OF RESEARCH ASSOCIATESHIP PROGRAM

On a scale of 1 - 10 (poor - excellent), please rate the following:

SHORT TERM VALUE

- ☒ 10 Development of knowledge, skills, and research productivity  
Comments

My knowledge and skills as a research scientist have improved exponentially during my time at the USAISR. I have mastered numerous specialized skills (e.g., transcranial Doppler ultrasound, microneurography) that will be assets for my future career. I have also had the privilege of working with a number of high calibre, motivated scientists who have encouraged me to be highly productive, as demonstrated by my publication and presentation record over the last 3 years.

LONG TERM VALUE

- ☒ 10 How the National Academies Associateship award affected your career to date  
Comments

The NRC postdoctoral associateship has provided the opportunity to join a highly successful government research team, and my experiences as a postdoc have enabled me to secure a position in this team for the next 2 years. My research experience, publication record and association with well reknowned scientists during my time at the USAISR will be valuable assets for my future career prospects.

LAB SUPPORT

- ☒ 8 Quality of support--equipment, funding, orientation, safety and health guidelines, etc.  
Comments

I have received optimal support in terms of equipment, funding, orientation and health and safety guidelines within our laboratory. However, when I first arrived at the USAISR I did not receive any general orientation through either the ISR, or the Brooke Army Medical Center (BAMC). However, I believe this deficiency has been resolved, as this training has been enforced for all recent NRC postdocs.

ADVISER/MENTOR SUPPORT

- ☒ 10 Quality of mentoring from the Lab NRC Adviser (USMA Mentor, if applicable)

Comments

I have been very lucky to have two mentors at the USAISR, my primary NRC advisor Dr. Victor Convertino and also Dr. Kathy Ryan. Drs. Convertino and Ryan have very different, but complementary management styles that have provided



me with essential mentoring and guidance, but have also encouraged the independence required from a postdoc. Both of my mentors have high personal and scientific integrity, and as such, have been exceptional role models for a young scientist.

#### LPR SUPPORT

6 Quality administrative support from the LPR

#### Comments

I have not had much association with the NRC laboratory program representative at the USAISR, Dr. Michael Dubick, aside from submitting paperwork upon my arrival in 2005 and gaining signatures for travel authorizations and renewal forms. I am not sure of the exact role of the LPR, but I have found that the best administrative support has come from the NRC directly.

#### NRC SUPPORT

9 Quality of administrative support from the NRC

#### Comments

Generally, I have received excellent administrative support from the NRC. In particular, Ms. Peggy Wilson has been exceptionally helpful with all of my visa and immigration issues. I have also traveled extensively during my time as an NRC postdoc, and while I have had some issues with obtaining information on travel authorization approvals, I have always been able to complete my travel successfully, including the necessary reimbursements.

#### 18) PLEASE PROVIDE ANY SUGGESTIONS FOR PROGRAM IMPROVEMENT.

1. Better communication regarding the receipt and approval of travel authorization materials. On a number of occasions, I had to chase down my TA approvals in order to make further travel arrangements.
2. As has been documented previously, I had significant issues receiving my background clearance upon arriving at the USAISR. This process took 2 years to complete, during which time I did not have access to institutional email, shared drives or broadband internet. While I understand this process is the responsibility of the host institute, I would suggest that the NRC liaise with host laboratories to ensure adequate access to essential facilities for their postdoctoral associates prior to employment.
3. During my three years as an NRC postdoctoral associate, I have not had contact with any peers in the NRC-sponsored program outside of this institute. It may be beneficial to host yearly meetings for NRC postdocs across the US to share our experiences (both personal and professional), and to develop social and professional networks within the program.

#### US Postal Service mailing address

Research Associateship Programs  
The National Academies  
500 Fifth Street NW  
Washington, DC 20001

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ID#

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[www.national-academies.org/rap](http://www.national-academies.org/rap)**

cc: Research Associateship Programs

#### Express Delivery address

Research Associateship Programs  
The National Academies  
2001 Wisconsin Avenue, NW [GR 322A]  
Washington, DC 20007

Rev. 08/2006  
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2. Rupp, T.L., Wesensten, N.J., Bliese, P.D., Balkin, T.J. Prior Sleep Extension Facilitates Learning During Sleep Restriction and Recovery. (in preparation).

10) *PATENT OR COPYRIGHT APPLICATIONS RESULTING FROM NRC ASSOCIATESHIP RESEARCH*  
Provide titles, inventors, and dates of applications.

11) *PRESENTATIONS AT SCIENTIFIC MEETINGS OR CONFERENCES*

Provide complete references: author(s), title, abstract/proceeding citation, meeting name and location.

International

Poster presentations:

1. European Sleep Research Society, Glasgow, Scotland (9/12/08). "Speech Degradation With Sleep Restriction and Recovery." Rupp, T.L., MacAuslan, J., Boyce, S., Balkin, T.J.
2. World Congress of the World Federation of Sleep Research and Sleep Medicine Societies, Cairns, Australia (9/11/07). "Risk-taking propensity with sleep restriction and recovery: A preliminary report." Rupp, T.L., Grugle, N., Krugler, A., Balkin, T., Killgore, W.D.S.

Domestic

Oral presentations:

1. Association of Professional Sleep Societies Annual Meeting, Baltimore, MD. (6/9/08). "Sleep Extension Improves Alertness And Performance During and Following 7 Nights Of Subsequent Sleep Restriction." Rupp, T.L., Wesensten, N.J., Bliese, P.D., Balkin, T.J.
2. National Sleep Foundation and Sleep Research Society Young Investigators Conference, Washington, DC. (3/2/08). "Sleep Extension Improves Performance and Facilitates Task Acquisition During And Following 7 Nights of Subsequent Sleep Restriction." Rupp, T.L., Wesensten, N.J., Balkin, T.J.

Poster presentations:

1. Association of Professional Sleep Societies Annual Meeting, Baltimore, MD (6/10/08). "Prior Sleep Extension Facilitates Learning Of A Mathematical Processing Task During Sleep Restriction and Recovery." Rupp, T.L., Raphael, A., Wesensten, N.J., Balkin, T.J.
2. Association of Professional Sleep Societies Annual Meeting, Philadelphia, PA (6/11/07). "Caffeine, Dextroamphetamine, and Modafinil Improve PVT Performance After Sleep Deprivation and Recovery Sleep." Rupp, T.L., Grugle, N., Krugler, A., Balkin, T.J., Killgore, W.D.S.
2. Association of Professional Sleep Societies Annual Meeting, Philadelphia, PA (6/11/07). "The Effects of Modafinil, Dextroamphetamine, and Caffeine on Verbal and Nonverbal Fluency in Sleep Deprived Individuals." Rupp, T.L., Killgore, D., Balkin, T.J., Grugle, N., Killgore, W.S.

12) *SEMINARS OR LECTURES DELIVERED AT UNIVERSITIES AND/OR INSTITUTES* Include dates, names and locations of seminars.

1. William C. Dement Summer Apprenticeship Young Investigator Retreat, Brown University, Providence, RI. (8/18/08). "Long-term, Complex, and Pervasive Effects of Sleep Restriction on Cognition and Behavior." Rupp, T.L.
2. Centers for Disease Control, Sleep Workshop, Atlanta, GA. (5/7/08). "Sleep Extension Improves Performance and Facilitates Task Acquisition During And Following 7 Nights of Subsequent Sleep Restriction." Rupp, T.L., Wesensten, N.J., Balkin, T.J.
3. E.P. Bradley Sleep Research Laboratory, Providence Sleep Interest Group, Providence, RI. (1/15/08) "Sleepiness and Performance with Chronic Sleep Restriction and Recovery." Rupp, T.L., Balkin, T.J.
4. Children's National Medical Center, Pediatrics and Psychiatry, Washington, D.C. (4/12/07). "Sleepiness and Performance with Alcohol and Acute and Chronic Sleep Restriction" Rupp, T.L., Carskadon, M.A.

13) *PROFESSIONAL AWARDS RECEIVED DURING TENURE*

- |      |   |
|------|---|
| 2008 | National Sleep Foundation-Sleep Research Society Young Investigators Conference, 1st Place, Basic Research  |
| 2008 | American Academy of Sleep Medicine Young Investigators Award, Honorable Mention   |
| 2007 | Sleep Research Society Trainee Travel Award recipient for the World Sleep conference abstract submission.   |
| 2007 | Sleep Research Society Trainee Merit Award recipient for Association of Professional Sleep Societies Annual Scientific Meeting abstract submission. |

14) *POST-TENURE POSITION / JOB TITLE*

Research Psychologist, WRAIR

15) NAME AND ADDRESS OF POST-TENURE POSITION / JOB ORGANIZATION

Walter Reed Army Institute of Research  
503 Robert Grant Ave  
Dept. of Behavioral Biology  
Silver Spring, MD 20009

16) POST-TENURE POSITION STATUS / CATEGORY Please indicate only one.

- |  |   |
|--|---|
| <input type="checkbox"/> Remain at Host Agency as Permanent Employee                     | <input type="checkbox"/> Research/Teaching at US College/University         |
| <input checked="" type="checkbox"/> Remain at Host Agency as Contract/Temporary Employee | <input type="checkbox"/> Research/Teaching at Foreign College/University    |
| Abbreviate Host Laboratory/Center <u>WRAIR</u>   | <input type="checkbox"/> Research/Administration in Industry                |
| <input type="checkbox"/> Research Position at Another US Government Laboratory           | <input type="checkbox"/> Research/Administration in Non-Profit Organization |
| <input type="checkbox"/> Administrative Position at US Government Laboratory             | <input type="checkbox"/> Postdoctoral Research                              |
| <input type="checkbox"/> Research Position at Foreign Government Laboratory              | <input type="checkbox"/> Self Employed                                      |
|  | <input type="checkbox"/> Other: specify _____                               |

17) APPRAISAL OF RESEARCH ASSOCIATESHIP PROGRAM

On a scale of 1 - 10 (poor - excellent), please rate the following:

SHORT TERM VALUE

- 9 Development of knowledge, skills, and research productivity  
Comments

LONG TERM VALUE

- 9 How the NRC Associateship award affected your career to date  
Comments

LAB SUPPORT

- 9 Quality of support from the Laboratory--equipment, funding, orientation, safety and health guidelines, etc.  
Comments

ADVISER/MENTOR SUPPORT

- 9 Quality of mentoring from the Laboratory NRC Adviser (USMA Mentor, if applicable)  
Comments

LPR SUPPORT

- 8 Quality of administrative support from the Laboratory (e.g., NIST) NRC Program Representative (LPR)  
Comments

NRC SUPPORT

- 9 Quality of administrative support (applications, inquiries, post-review, award-related, travel, etc.) from the NRC  
Comments

18) PLEASE PROVIDE ANY SUGGESTIONS FOR PROGRAM IMPROVEMENT.

Mail & Delivery Address

It is NOT necessary to mail the original.

The National Academies  
NRC Research Associateship Programs  
500 Fifth Street NW, #568  
Washington, DC 20001

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or do "Ctrl Click"

Rev. Jan. 2008

Suggestions for, or problems  
with, forms should be directed to  
the forms manager, Suzanne  
White, [swhite@nas.edu](mailto:swhite@nas.edu).

ID# 0510360

CC#

N/A

12) SEMINARS OR LECTURES DELIVERED AT UNIVERSITIES AND/OR INSTITUTES Include dates, names and locations of seminars.

N/A

13) PROFESSIONAL AWARDS RECEIVED DURING TENURE

N/A

14) POST-TENURE POSITION / JOB TITLE

Research Scientist

15) NAME AND ADDRESS OF POST-TENURE POSITION / JOB ORGANIZATION

T.R.U.E. Research Foundation  
8610 N. New Braunfels, Suite 705  
San Antonio, TX 78217

16) POST-TENURE POSITION STATUS / CATEGORY Please indicate only one.

- |  |  |
|--|--|
| <input type="checkbox"/> Remain at Host Agency as Permanent Employee                     | <input type="checkbox"/> Research/Teaching at US College/University                    |
| <input checked="" type="checkbox"/> Remain at Host Agency as Contract/Temporary Employee | <input type="checkbox"/> Research/Teaching at Foreign College/University               |
| Abbreviate Host Laboratory/Center <u>WRAIR</u>   | <input type="checkbox"/> Research/Administration in Industry                           |
| <input type="checkbox"/> Research Position at Another US Government Laboratory           | <input checked="" type="checkbox"/> Research/Administration in Non-Profit Organization |
| <input type="checkbox"/> Administrative Position at US Government Laboratory             | <input type="checkbox"/> Postdoctoral Research   |
| <input type="checkbox"/> Research Position at Foreign Government Laboratory              | <input type="checkbox"/> Self Employed   |
|  | <input type="checkbox"/> Other: specify _____  |

17) APPRAISAL OF RESEARCH ASSOCIATESHIP PROGRAM

On a scale of 1 – 10 (poor - excellent), please rate the following:

SHORT TERM VALUE

10 Development of knowledge, skills, and research productivity

Comments

I have improved substantially my English proficiency and gained new knowledge about malaria research.

LONG TERM VALUE

10 How the NRC Associateship award affected your career to date

Comments

The NRC Associateship award gave me an opportunity to conduct research at WRAIR, one of the leading malaria research institution in the world which will greatly enhance my career development in malaria research field.

LAB SUPPORT

10 Quality of support from the Laboratory--equipment, funding, orientation, safety and health guidelines, etc.

Comments

I was able to conduct my research work with sufficient support.

ADVISER/MENTOR SUPPORT

10 Quality of mentoring from the Laboratory NRC Adviser (USMA Mentor, if applicable)

Comments

Dr. Lin always kindly talked to me not only about research work but also about our lives in USA. Under his mentor, I was able to accomplish my proposed research and also improved my English skills.

LPR SUPPORT

10 Quality of administrative support from the Laboratory (e.g., NIST) NRC Program Representative (LPR)

Comments

Dr. Rothman always kindly helped me directly and indirectly through my adviser. I was able to conduct my research work with sufficient support from WRAIR scientists and administrators

NRC SUPPORT

10 Quality of administrative support (applications, inquiries, post-review, award-related, travel, etc.) from the NRC

Comments

Administrative support from NRC is always superb. I always receive timely information I need. All minor administrative issues were resolved quickly and satisfactory. As a result, I was able to conduct my research work at WRAIR free from anxiety. Especially, I was very pleased with the opportunity to meet NRC staff, Dr. Nyquist and Ms. Wilson while they visited Walter Reed Army Institute of Research.

18) PLEASE PROVIDE ANY SUGGESTIONS FOR PROGRAM IMPROVEMENT.

Mail & Delivery Address

It is NOT necessary to mail the original.

The National Academies

NRC Research Associateship Programs

500 Fifth Street NW, #568

Washington, DC 20001

ID# 0618 700

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academies.org/rap/Coordinators with Agencies.html](http://www7.national-academies.org/rap/Coordinators%20with%20Agencies.html)

If link does not connect, unprotect Word doc,  
or do "Ctrl Click"

Rev. Jan. 2008

Suggestions for, or problems  
with, forms should be directed to  
the forms manager, Suzanne  
White, [swhite@nas.edu](mailto:swhite@nas.edu).

CC#

assays for Leishmania screening and visceral leishmaniasis causative agent identification in sand flies. J. Med. Entomol. Submitted 2007.

Swanson, K.I., J.S. Lee, J.L. Groebner, M.L. O'Guinn, L.P. Hochberg, R.E. Coleman. Identification and phylogenetic analysis of Leishmania spp. isolated from sand flies captured in Iraq and Afghanistan. Submitted 2007.

Coleman, R.E., K.I. Swanson, L.P. Hochberg, J.S. Lee, J.C. McAvin, D.O. Eddington, M. Moodie, L. Gilmore, W. Gilmore, M.L. O'Guinn, J.L. Putnam. Impact of phlebotomine sand flies on U.S. military operations at Tallil Air Base, Iraq: 4. Detection and identification of Leishmania parasites in sand flies. J. Med. Entomol. Submitted 2008.

10) *PATENT OR COPYRIGHT APPLICATIONS RESULTING FROM NRC ASSOCIATESHIP RESEARCH*  
Provide titles, inventors, and dates of applications.

N/A

11) *PRESENTATIONS AT SCIENTIFIC MEETINGS OR CONFERENCES*  
Provide complete references: author(s), title, abstract/proceeding citation, meeting name and location.

International

N/A

Domestic

Coleman, R.E., J.C. McAvin, J.L. Putnam, J.S. Lee, K.I. Swanson, M.L. O'Guinn, M. Moodie, E.D. Rowton, and L.P. Hochberg. Assessment of sand flies as a means of evaluating the threat of leishmaniasis to military forces deployed to Iraq and Afghanistan. The 73rd American Mosquito Control Association Annual Meeting, Orlando, FL, April 2007.

12) *SEMINARS OR LECTURES DELIVERED AT UNIVERSITIES AND/OR INSTITUTES* Include dates, names and locations of seminars.

N/A

13) *PROFESSIONAL AWARDS RECEIVED DURING TENURE*

N/A

14) *POST-TENURE POSITION / JOB TITLE*

Technology Transfer Liaison

15) *NAME AND ADDRESS OF POST-TENURE POSITION / JOB ORGANIZATION*

Henry M. Jackson Foundation  
1401 Rockville Pike, Suite 600  
Rockville, MD 20852

16) *POST-TENURE POSITION STATUS / CATEGORY* Please indicate only one.

- ☐ Remain at Host Agency as Permanent Employee  
☐ Remain at Host Agency as Contract/Temporary Employee  
Abbreviate Host Laboratory/Center \_\_\_\_\_  
☐ Research Position at Another US Government Laboratory  
☐ Administrative Position at US Government Laboratory  
☐ Research Position at Foreign Government Laboratory

- ☐ Research/Teaching at US College/University  
☐ Research/Teaching at Foreign College/University  
☐ Research/Administration in Industry  
☒ Research/Administration in Non-Profit Organization  
☐ Postdoctoral Research  
☐ Self Employed  
☐ Other: specify \_\_\_\_\_

17) *APPRAISAL OF RESEARCH ASSOCIATESHIP PROGRAM*

On a scale of 1 - 10 (poor - excellent), please rate the following:

SHORT TERM VALUE

- ☒ Development of knowledge, skills, and research productivity  
Comments

I was able to work independently but also collaborated with other researchers in government labs and industry which allowed for development opportunities.

LONG TERM VALUE

- ☒ How the NRC Associateship award affected your career to date  
Comments

Due to my Associateship, I have been able to complete a postdoctoral fellowship. At the same time, I learned about and developed an interest in technology transfer, leading to my next position.

LAB SUPPORT

- ☒ Quality of support from the Laboratory—equipment, funding, orientation, safety and health guidelines, etc.



**Comments**

I was provided with more than adequate funding which allowed me to obtain all equipment and reagents I needed. I did tend to "fall between the cracks" when it came to some of the general aspects of being part of a research group since I did not "fit" into anyone's research section.

**ADVISER/MENTOR SUPPORT**

- 9 Quality of mentoring from the Laboratory NRC Adviser (USMA Mentor, if applicable)

**Comments**

Although LTC Coleman was always busy as the Division Director, he would make the time to meet with me or at least check in through email. It was more difficult in the last 6 months to have guidance due to his TDY.

**LPR SUPPORT**

- 9 Quality of administrative support from the Laboratory (e.g., NIST) NRC Program Representative (LPR)

**Comments**

Dr. Rothman has always been available for questions and approvals when they have been needed.

**NRC SUPPORT**

- 9 Quality of administrative support (applications, inquiries, post-review, award-related, travel, etc.) from the NRC

**Comments**

The administrative support from the NRC has been great. It would be helpful to have alternate contact information for individuals when they are away for an extended period of time.

18) PLEASE PROVIDE ANY SUGGESTIONS FOR PROGRAM IMPROVEMENT.

**Mail & Delivery Address**

NRC Research Associateship Programs  
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Suzanne White, at [swhite@nas.edu](mailto:swhite@nas.edu)

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